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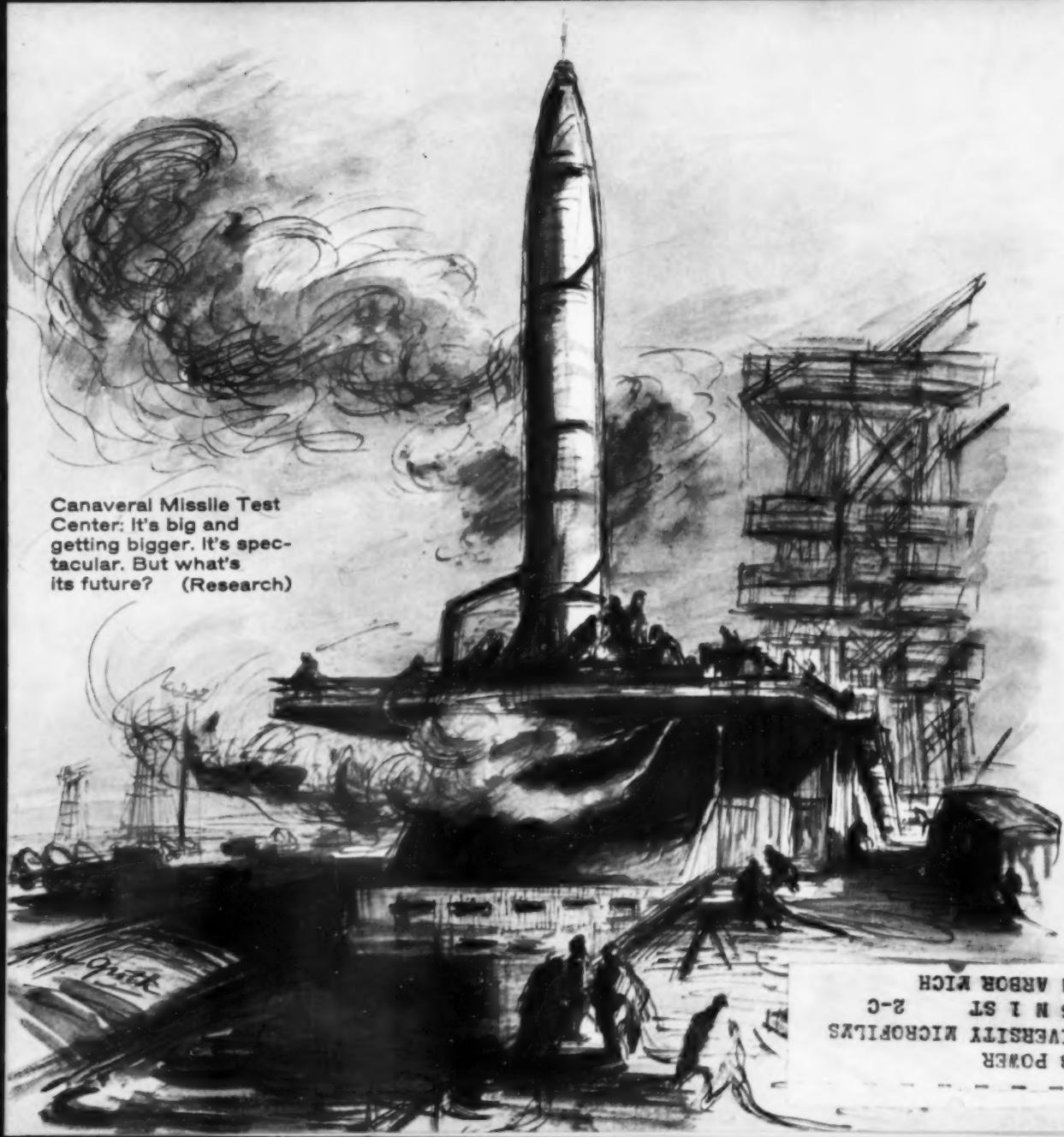
# BUSINESS WEEK

A McGRAW-HILL PUBLICATION

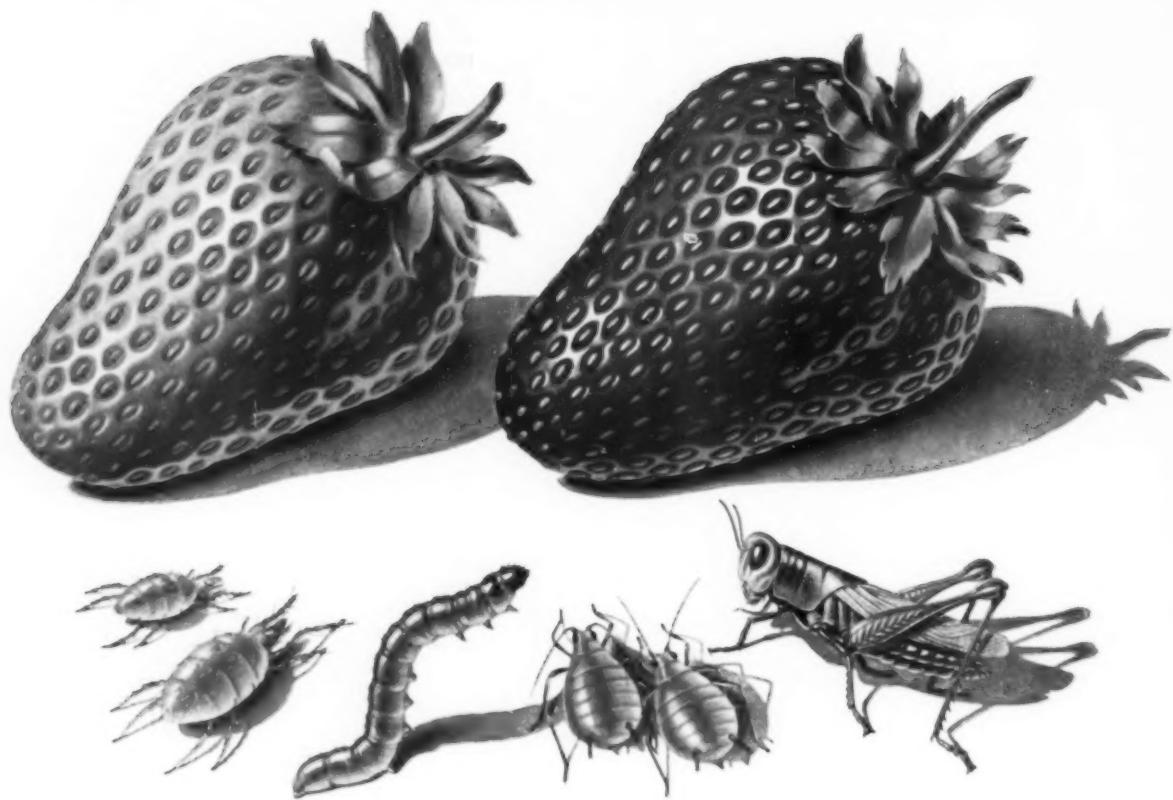
FIFTY CENTS

JUNE 7, 1958

Canaveral Missile Test Center: It's big and getting bigger. It's spectacular. But what's its future? (Research)



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ANN ARBOR MICH



## now **RED** means **STOP!**

**T**HE INSECT that passes up a green crop for a tasty red-ripe one will do well to watch his step. Shell Chemical has changed the rules . . .

Formerly, the farmer had to stop using sprays as crops approached maturity. Now Shell Chemical's *Phosdrin*® insecticide protects fruits and vegetables during the critical period just before harvest. *Phosdrin* does its work, then vanishes before the crop is picked. This remarkable new product is proving itself effective on a lengthening list of crops.

Newest member of a famous family of pesticides, *Phosdrin* is a demonstration to the insect world that Shell Chemical intends to keep helping the farmer.

**Shell Chemical Corporation**  
Chemical Partner of Industry and Agriculture

NEW YORK



**GENERAL BUSINESS**

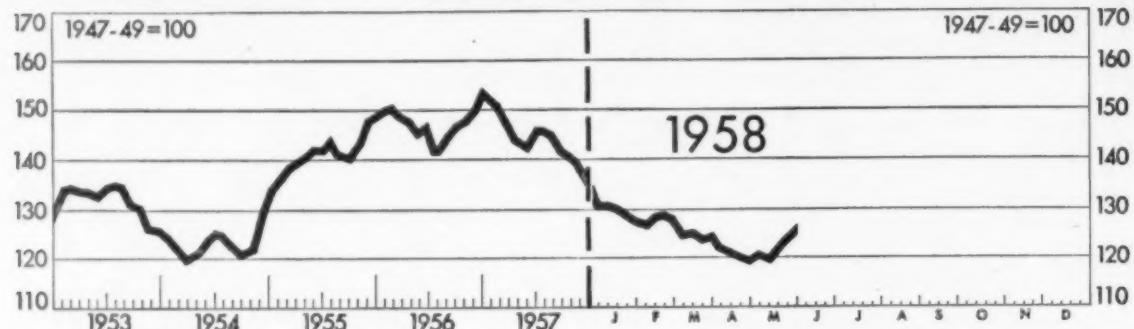
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# FIGURES OF THE WEEK



## BUSINESS WEEK INDEX (chart) . . . . .

### PRODUCTION

	1946 Average	Year Ago	Month Ago	Week Ago	\$ Latest Week
Steel ingot (thous. of tons).....	91.6	144.8	121.2	†125.2	*126.8
Automobiles and trucks.....					
Engineering const. awards (Eng. News-Rec. 4-wk daily av. in thous.).....	62,880	110,867	105,776	†112,909	92,263
Electric power (millions of kilowatt-hours).....	\$17,083	\$62,530	\$62,350	\$76,169	\$83,863
Crude oil and condensate (daily av., thous. of bbls.).....	4,238	10,936	11,251	11,316	11,000
Bituminous coal (daily av., thous. of tons).....	4,751	7,418	6,227	6,256	6,242
Paperboard (tons) .....	1,745	1,579	1,120	†1,212	1,262
	167,269	261,684	246,385	259,071	247,209

### TRADE

Carloadings: mfrs., miscellaneous and l.c.l. (daily av., thous. of cars).....	82	66	55	57	57
Carloadings: all others (daily av., thous. of cars).....	53	54	33	37	38
Department store sales index (1947-49 = 100, not seasonally adjusted).....	90	124	136	126	128
Business failures (Dun & Bradstreet, number).....	22	225	336	337	278

### PRICES

Spot commodities, daily index (Moody's, Dec. 31, 1931 = 100).....	311.9	420.3	391.8	403.3	400.8
Industrial raw materials, daily index (BLS, 1947-49 = 100).....	††73.2	93.2	80.3	81.3	81.9
Foodstuffs, daily index (BLS, 1947-49 = 100).....	††75.4	83.9	90.1	92.9	92.7
Print cloth (spot and nearby, yd.).....	17.5¢	17.9¢	17.2¢	17.3¢	17.4¢
Finished steel, index (BLS, 1947-49 = 100).....	††76.4	174.4	181.6	181.6	181.6
Scrap steel composite (Iron Age, ton).....	\$20.27	\$50.50	\$32.00	\$35.33	\$36.00
Copper (electrolytic, delivered price, E & MJ, lb.).....	14.045¢	31.763¢	24.795¢	†24.670¢	24.744¢
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.).....	\$1.97	\$2.22	\$2.25	\$2.34	\$2.38
Cotton, daily price (middling, 1 in., 14 designated markets, lb.).....	**30.56¢	33.94¢	34.66¢	34.76¢	34.78¢
Wool tops (Boston, lb.).....	\$1.51	\$2.22	\$1.60	#	\$1.62

### FINANCE

500 stocks composite, price index (S&P's, 1941-43 = 10).....	17.08	47.34	43.79	43.83	44.34
Medium grade corporate bond yield (Baa issues, Moody's).....	3.05%	4.58%	4.64%	4.61%	4.58%
Prime commercial paper, 4 to 6 months, N. Y. City (prevailing rate).....	¾-1%	3% %	1% %	1% %	1% %

### BANKING (Millions of Dollars)

Demand deposits adjusted, reporting member banks.....	††45,820	55,149	55,699	54,671	55,413
Total loans and investments, reporting member banks.....	††71,916	86,242	92,483	91,803	92,115
Commercial and agricultural loans, reporting member banks.....	††9,299	31,077	30,185	29,928	29,790
U. S. gov't guaranteed obligations held, reporting member banks.....	††49,879	25,878	30,548	30,856	31,103
Total federal reserve credit outstanding.....	23,888	24,833	24,566	25,016	24,994

### MONTHLY FIGURES OF THE WEEK

	1946 Average	Year Ago	Month Ago	Latest Month
Private expenditures for new construction (in millions).....	May	\$803	\$2,882	\$2,583
Public expenditures for new construction (in millions).....	May	\$197	\$1,245	\$1,120
Manufacturers' inventories (seasonally adjusted, in billions).....	April	\$21.3	\$53.7	\$52.0
Wholesalers' inventories (seasonally adjusted, in billions).....	April	\$5.5	\$12.8	\$12.4
Retailers' inventories (seasonally adjusted, in billions).....	April	\$9.8	\$23.7	\$24.1
Consumer credit outstanding (in millions).....	April	\$6,704	\$41,247	\$42,562
Installment credit outstanding (in millions).....	April	\$3,174	\$31,786	\$32,983

\* Preliminary, week ended May 31, 1958.  
† Revised.

† Estimate.  
\*\* Ten designated markets, middling ‡ in.

¶ Date for 'Latest Week' on each series on request.  
# Insufficient trading to establish a price.

THE PICTURES—Cover—John Groth; 23—(lt.) Herb Kratovil; 25—Campbell-Mithum, Inc.; 28—W.W.; 29—(top lt., top rt., & bot. rt.) W.W., (bot. lt.) U.P.I.; 54, 55, 57, 58—John Groth; 99—W.W.; 117—U.P.I.

B.F.Goodrich



## Shaking rubber keeps coal on the run

*B.F. Goodrich improvements in rubber brought extra savings*

**Problem:** At this power plant, coal stored in silos was sent on its way to furnaces through metal pipes. But when the coal was wet, it stuck together, became clogged in the pipes. Coal delivery to the furnace was delayed while workers pounded the pipes clear with sledge hammers.

**What was done:** A company engineer came up with a unique solution to the problem. The metal pipe was replaced with a rubber hose specially developed by B.F.Goodrich to handle

rough materials. A vibrator was attached to the hose to keep the coal flowing freely.

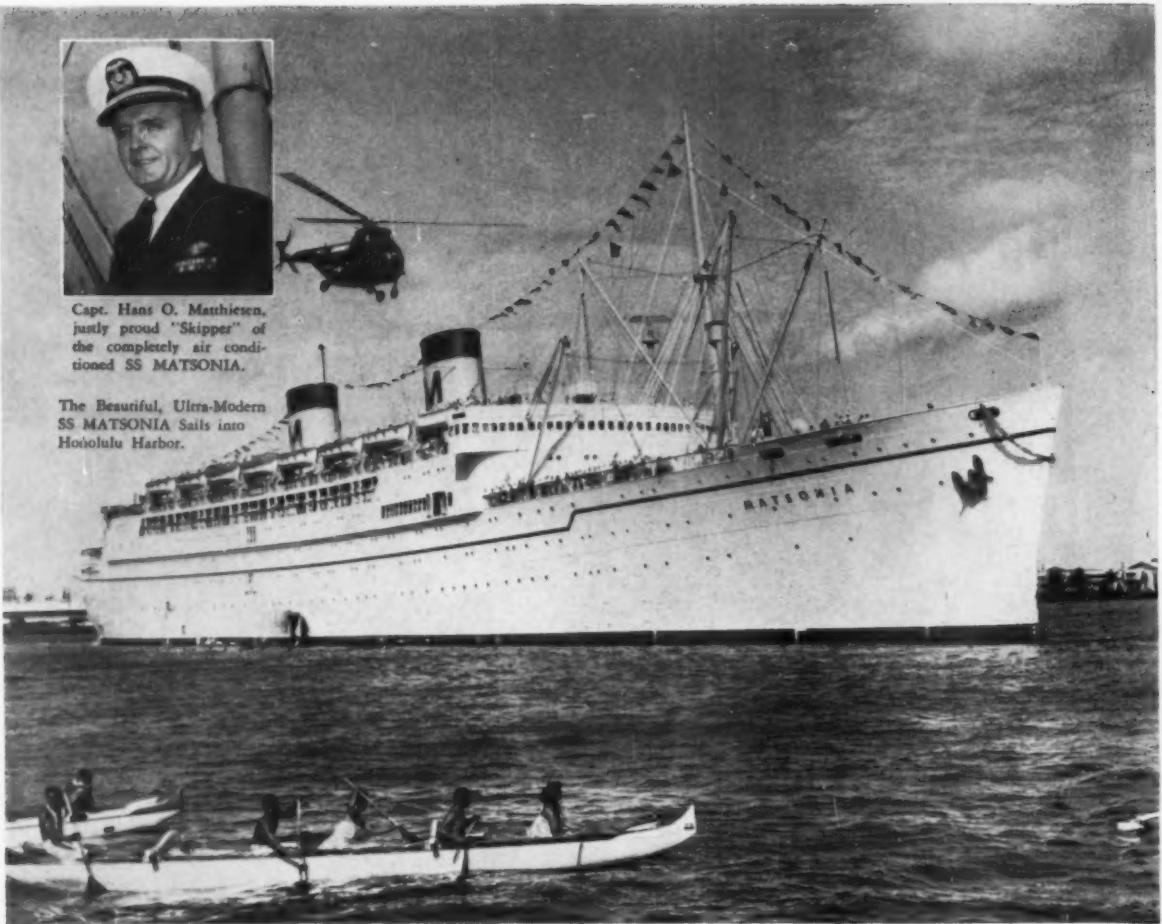
**Savings:** The B.F.Goodrich rubber hose was tried. That was one year ago, and there has not been one delay because of clogging since.

**Extra benefits:** The constant wear of coal sliding down the metal pipes wore them out in about one year. But after one year of service, the B.F.Goodrich hose is still going strong, shows no sign of wear. No holes, no repairs,

no problems of any kind. That's because the lining of this hose is made with Armorite, the toughest, wear-resistant rubber known. This rubber is so tough that, on many jobs, it outlasts the hardest steel 10 to 1.

**Where to buy:** Your B.F.Goodrich distributor has exact specifications for the B.F.Goodrich hose described here. And, as a factory-trained specialist in rubber products, he can answer your questions about all the rubber products B.F.Goodrich makes for industry. *B.F.Goodrich Industrial Products Co., Dept. M-347, Akron 18, Ohio.*

# B.F.Goodrich *industrial products*



Capt. Hans O. Matthiesen,  
justly proud "Skipper" of  
the completely air conditioned  
SS MATSONIA.

The Beautiful, Ultra-Modern  
SS MATSONIA Sails into  
Honolulu Harbor.

## MATSON LINES DEPEND ON "BUFFALO" FANS FOR RELIABILITY AT SEA

When a major steamship line spends 20 million dollars to modernize a passenger ship, you can be sure that the results achieved far out-weigh the costs.

This is certainly true of the all-new MATSONIA. Unrivalled safety, luxury, convenience and comfort welcome the fortunate passengers who sail on this pride of the Matson Lines. For example, passengers and crew can "tune-in" just the climate they desire in each room by simply turning a dial.

Vital to the MATSONIA's unique, new selective air conditioning and ventilation system is a huge battery of "Buffalo" Fans. It is logical that "Buffalo" Fans were selected for the important air moving job on this super-liner. During the past 81 years, "Buffalo" Fans have earned a world-wide reputation for highest efficiency, extremely quiet operation and long-lasting dependability.

Just as Matson Lines depend on "Buffalo" Fans for *reliability at sea*, so you can depend on "Buffalo" Fans for your own air jobs...ashore or afloat. Insist on "Buffalo" Fans for *your* next air moving project...expert engineering service is as close as your nearby "Buffalo" representative.

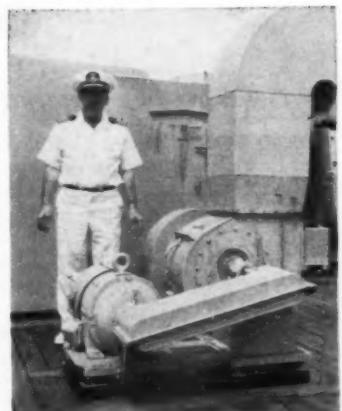


**BUFFALO FORGE COMPANY**

Buffalo, N. Y.

Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

VENTILATING • AIR CLEANING • AIR TEMPERING • INDUCED DRAFT  
EXHAUSTING • FORCED DRAFT • COOLING • HEATING • PRESSURE BLOWING



The MATSONIA's Chief Engineer, Helge Lundby, is pleased with the fine performance of this and the many other "Buffalo" Fans aboard his ship.

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## READERS REPORT

### The Big Dip

Dear Sir:

Re: A Recession by Any Other Name [BW—Apr. 12'58, p94] . . . it's not surprising The Dip hasn't been mentioned, for its accuracy in describing the pocket picking economy wouldn't appeal to men who don't feel the Touch. Negative or not, such a term would likely be preferred by sidewalk citizens for its liberal, if colloquial, truth. . . .

NOEL LOVELAND  
ORCHARD LAKE, MICH.

### Selling Credit

Dear Sir:

Re: Consumers Cool to Credit Plans [BW—Apr. 19'58, p63], the enclosed paragraph: (A Milwaukee men's specialty shop chain also finds the consumer is lethargic about credit: "You almost have to work as hard to sell credit as you do to sell the merchandise.") is, to my mind, one essential reason why credit sales are off.

So many stores are selling credit rather than merchandise. . . .

LOUIS M. HALL, JR.  
MIAMI, FLA.

### Off the Beaten Path

Dear Sir:

As specialists in off the beaten path travel we congratulate *BUSINESS WEEK* on its . . . roundup of what the American tourist is up to this year [BW—May 10'58, p72]. As you say the trend is toward the unique and trammled. Today's travelers want more than the old standbys. . . .

ELIAS NAMERDY

PRESIDENT  
NAMETRA, INC.  
NEW YORK, N. Y.

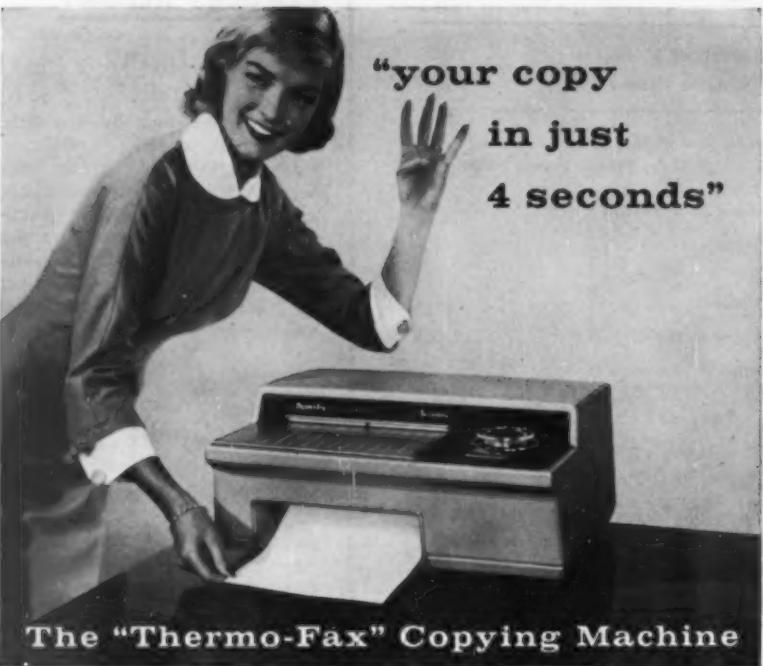
### Need New Approach

Dear Sir:

Your interesting article on the development of the artificial heart [BW—May 17'58, p170] touched only briefly on what we think is the real problem in medical equipment research.

There is a great lack of mechanical and electronic engineering knowhow among medical researchers. Twenty-five years of development of wonder drugs has made most of the medical researchers oriented towards chemistry.

It is always shocking to us as medical equipment manufacturers



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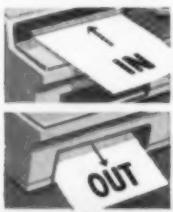
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to see the lag in the application of developed industrial techniques to the solution of medical problems.

It might be more fruitful for the trustees of foundations paying for so much medical research to take a little away from the "Cure it with a syringe" researchers and back the . . . "nuts and bolts" researchers.

Spectacular medical-mechanical developments such as the heart lung machine and the artificial kidney don't seem to capture the imagination of the donating public as does the development of, say, another Salk vaccine.

FRANK J. REGAN

PRESIDENT  
O. E. M. CORP.  
EAST NORWALK, CONN.

#### Dollar Cost Averaging

Dear Sir:

Dollar averaging [BW—Mar. 15 '58, p135] is not a way to recoup stock losses. Dollar cost averaging, as it is correctly termed, is an arithmetical principle. Long-term strength, dividend yield, "the present bear market" . . . proper selection . . . cutting into capital gains, the possibility of having to liquidate when prices are low, nerve . . . all these things have nothing to do with the system of dollar cost averaging.

. . . One cannot compare the results of dollar cost averaging in one investment with the results of dollar cost averaging in another investment. The only valid comparison is that of the results of purchasing an investment on a unit basis with the results of purchasing it on a dollar cost averaging basis.

Dollar cost averaging . . . in the purchase of a commodity with fluctuating prices . . . means the application of a fixed amount of dollars to a variable price. If a fixed amount of units is purchased in regular intervals, cost average and price average (of the commodity purchased) will be identical over any given period of time. If, on the other hand, a fixed amount of dollars is applied regularly the cost average (of the commodity) will be lower than the price average in the same period. . . .

FRED K. KERPE

NEW YORK, N. Y.

\* Reader Kerpen does a fine job explaining "dollar cost averaging."

Letters should be addressed to Readers Report Editor, BUSINESS WEEK, 330 West 42nd Street, New York 36, N. Y.

# FIVE WAYS

## out-of-town telephone calls

### can increase your sales

**1. Cover more territory**—and locate more prospects. A telephone call takes mere seconds to span the miles—in *any* direction.

**2. Serve present customers more promptly**—profitably. Frequent telephone contacts can keep you up-to-the-minute on their needs.

**3. Make field trips more productive.** Telephoning ahead for appointments sets the stage for businesslike selling and reduces costly “cold” calls.

**4. Keep your sales force in touch.** Leads, price data and sales strategies are quickly exchanged by telephone, with a minimum of paperwork.

**5. Close many sales directly,** with so much less effort, travel time and expense.

Make sure your salespeople (and others in your company) are making the best possible use of out-of-town telephoning—on a *consistent, planned* basis. You'll find *it pays*.

*Rolled Steel Corporation, Skokie, Illinois, has 18 salesmen, each of whom telephones 20 to 25 prospects every day. In just 10 years, the company has built an \$8.5 million volume through telephone sales.*

**BELL TELEPHONE SYSTEM**



**YOU SAVE MONEY  
WHEN YOU CALL STATION-TO-STATION  
Instead of Person-to-Person**

<i>For example:</i>	<i>Day Rates (first 3 minutes)</i>	<i>Each Added</i>	
	<i>Person-to- Person</i>	<i>Station-to- Station</i>	<i>Minute (applies to all calls)</i>
Charleston, W. Va., to Pittsburgh	\$1.00	70¢	20¢
Milwaukee to Minneapolis	\$1.40	\$1.00	25¢
Newark, N.J., to Cleveland	\$1.55	\$1.10	30¢
Boston to Chicago	\$2.25	\$1.60	45¢
Seattle to Washington, D.C.	\$3.50	\$2.50	65¢

*Add 10% Federal Excise Tax*

# WHAT THE MERGER OF ARMCO STEEL AND NATIONAL SUPPLY MEANS TO INDUSTRY AT HOME AND ABROAD

The merger of The National Supply Company into Armco Steel Corporation brings together two well-established companies whose facilities and markets are complementary in the fullest sense. Each company will add to the strength of the other and thereby bring new and better products and services to industry at home and abroad.

The effect of this alliance on the future of both companies and, indeed, on industry itself, will be of far-reaching importance.

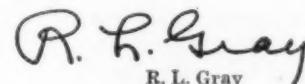
To begin with, Armco is known as the company "where new steels are born." It is a leader in the field of steel research. For more than half a century, the many new kinds of steel and steel products developed by Armco have helped steel users in this country and overseas to reduce costs, increase efficiency, broaden markets.

For its part, National Supply is one of the largest producers and distributors of oil field products. It serves the oil industry through a network of company-owned supply stores located in every major oil field in the United States, Canada and Venezuela. Its welded and seamless steel pipe, oil field machinery and equipment are known the world over.

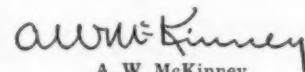
Now, with the combined resources, research facilities and technical know-how of the two organizations, the opportunity to serve the customers of both becomes even greater. Many of the advantages to be derived from this integration will soon be apparent. However, the full benefit of the merger will not be attained immediately due to contract commitments.

Customer relations will remain unchanged. The policies and principles that have so successfully guided both Armco Steel and National Supply in the past will not be altered by the merger.

It is the sincere belief of the management that the wide scope of opportunity offered by the unification of these two already strong and successful companies will mean a new era of growth and progress.

  
R. L. Gray

President, Armco Steel Corporation

  
A. W. McKinney

President, The National Supply Company



Looking upward through the huge derrick used in drilling the world's deepest well.

## Deepest well will probe earth's interior

While man-made satellites explore outer space, a new venture into the physical unknown is taking place in Caddo County, Okla. It is Howell & Howell's giant power oil drilling rig, now steadily pushing on to its goal of 24,000 feet—deeper than man has ever probed the earth's crust.

To prepare for reaching Ordovician oil sands more than  $4\frac{1}{2}$  miles down required the solving of many new and special problems. Equipment had to be selected to stand the tremendous strain which super-

deep drilling imposes. But no problem was involved in selecting the huge pumps that force drilling "mud" into the well to lubricate the bit and remove cuttings. Naturally, the choice was Gardner-Denver.

Whether the new deep well strikes oil or not, it promises—by its very depth—to uncover new knowledge of the earth's interior structure. And as usual in big, important projects, Gardner-Denver is in the picture. *Gardner-Denver Company, Quincy, Ill.*



One of the two big Gardner-Denver GXR mud pumps used on world's depth-record oil well.



ENGINEERING FORESIGHT—PROVED ON THE JOB  
IN GENERAL INDUSTRY, CONSTRUCTION, PETROLEUM AND MINING

**GARDNER - DENVER**



## Give high office costs a vacation this year

It used to happen sometime during the year in nearly every office. The work load was light, yet the full office staff was kept on—sometimes with only three days of work to do out of five. But of course you had to pay for a full five-day work week.

That was before KELLY GIRLS® service made available qualified, competent temporary office help, trained and tested in all the special white collar girl skills required in modern offices.

Now, you can keep full-time employment at a minimum, and simply call in one or more Kelly Girls on the days you need them. It means you're never stuck with *too much* help when work peaks level off at any time of year, because Kelly Girls come and go as YOU please.

### VACATION REPLACEMENTS

And Kelly Girls service ends another seasonal problem, too—vacation absences. This year, as in the past, tens of thousands of Kelly Girls will make summer something to look forward to in one-girl offices, large corporations and in offices just like yours all over the country, where vacation

absences threaten to let the work pile up and send office costs skyward because of overtime.

Why are Kelly Girls in such demand? The reasons are simple: Screening, testing, interviewing is all done for you by Kelly personnel counselors. Kelly Girls are bonded, insured, and they're guaranteed to perform to the most exacting standards.

Kelly Girls work for you by the day, week, month or longer, but they're on *our* payroll, not yours. We bill you just for hours-worked, as shown by a time card *you* approve. You have no bothersome tax and social security paperwork; you pay no overtime, "cost-of-living" bonuses or fringe benefits—which a U. S. Chamber of Commerce survey showed can average 39.2 cents an hour or 20.3% of your payroll! And, of course, Kelly Girls service ends the need for severance pay and unemployment compensation costs.

Find out for yourself the many advantages of using Kelly Girls in your office all year long. Your nearest Kelly Girl Office can even arrange for any number of Kelly Girls to fill in automatically according to this year's office vacation schedule—starting tomorrow, if you wish.

## How Kelly Girls save you time, money, worries



**YOU ACTUALLY SAVE . . .** An oil company found it cost \$300 to hire a temporary worker, and another \$300 to dismiss this worker. You avoid this expense when you use bonded, tested, guaranteed Kelly Girls.



**"I'M YOUR VACATION REPLACEMENT"**, was a welcome introduction in more than 18,000 businesses—many of them one-girl offices—where Kelly Girls filled-in during vacation absences last summer. Kelly Girls can also relieve your peak load periods caused by illnesses or work surges.



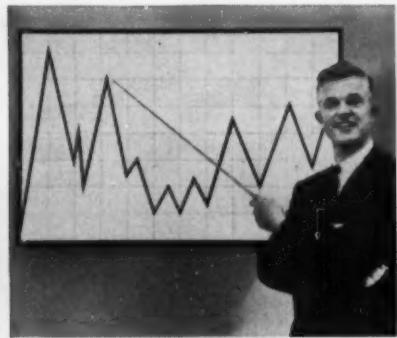
**FOR SPECIAL JOBS . . .** A Midwestern bank faced with a large rush job asked for and quickly got 175 girls for a six-week period. An automobile manufacturer uses from 3 to 150 Kelly Girls in one day to update its mailing list periodically.



**NO OVERTIME . . .** One retail chain uses six girls in each of ten stores for monthly inventory rather than make overtime demands which can increase employee fatigue, decrease normal efficiency.



**CONFIDENTIAL . . .** Many firms insure impartiality by using Kelly Girls for such jobs as proxy counts, calculating payroll, bonus accounting, or other cases where outside objectivity is desired.



**END PEAK LOAD PROBLEMS . . .** An auto manufacturer uses 150 girls one weekend each month to map out parts scheduling. Estimated saving in overtime payment to permanent employees: \$75,000 annually. Another company uses Kelly Girls in 40 cities for a periodic shopping survey.



**CALL TODAY . . .** for whatever office skill your situation may require . . . you can expect a competent Kelly Girl first thing tomorrow.

### FOR YOUR OFFICE—A FREE BOOKLET

Here's an informative 32-page booklet entitled "Profits from Business Letters," by J. F. Bender, Ph.D. . . . a popular and profitable letter writing aid for executives and their staffs. For your free copy write direct to KELLY GIRL Service, Inc., Box 3589, Detroit 3, Michigan.

# Kelly Girl

SERVICE, INC.



58-B

(A DIVISION OF RUSSELL KELLY OFFICE SERVICE, INC.)

Headquarters, Detroit 3, Michigan

WORLD'S LARGEST SUPPLIER OF TEMPORARY OFFICE HELP

### KELLY GIRL SERVICE IS NATION WIDE

Akron . . . . .	FR 6-3512	Des Moines . . . . .	AT 2-0259	Lubbock, Tex. . . . .	SH 4-6271	Roanoke . . . . .	DI 5-0901
Amarillo . . . . .	DR 6-4353	Detroit . . . . .	WO 3-9510	Medford, Ore. . . . .	3-5805	Rochester, N. Y. . . . .	BA 5-1315
Atlanta . . . . .	JA 4-5667	Erie . . . . .	50-118	Memphis . . . . .	JA 7-3431	Sacramento . . . . .	GI 3-2860
Baltimore . . . . .	MU 5-3195	Eugene, Ore. . . . .	DI 3-5227	Miami . . . . .	FR 3-5412	San Antonio . . . . .	CA 7-1217
Baton Rouge . . . . .	DI 8-5718	Flint . . . . .	CE 8-2623	Minneapolis . . . . .	BR 3-7340	San Francisco . . . . .	BU 1-0265
Battle Creek . . . . .	WO 2-8486	Fort Wayne . . . . .	EA 5869	Mobile . . . . .	FE 9-7154	Seattle . . . . .	MA 4-5959
Birmingham . . . . .	FA 4-7693	For Worth . . . . .	ED 2-2535	Monterey . . . . .	HE 8-2414	Spokane . . . . .	RI 7-5933
Boston . . . . .	LI 2-3725	Grand Rapids . . . . .	GL 9-0324	Nashville . . . . .	FR 2-9133	St. Louis . . . . .	GA 1-4111
Buffalo . . . . .	MA 2252	Hartford . . . . .	JA 7-1195	Newark . . . . .	AL 5-8368	St. Paul . . . . .	CA 4-3396
Canton . . . . .	OL 2-4202	Honolulu, T. H. . . . .	5-8219	MA 3-4571	MA 3-4571	South Bend . . . . .	CB 3-3158
Charleston, W. Va. . . . .	DI 2-5992	Houston . . . . .	CA 4-6341	New Orleans . . . . .	EX 1451	Syracuse . . . . .	HA 2-8253
Charlotte, N. C. . . . .	FR 7-6366	Huntington, W. Va. . . . .	JA 9-2141	New York City . . . . .	MU 7-4480	Tacoma . . . . .	BR 2-3380
Chattanooga . . . . .	AM 7-4397	Indianapolis . . . . .	ME 5-4400	Oakland . . . . .	HI 4-8964	Toledo . . . . .	CH 6-2211
Cincinnati . . . . .	MA 1-3436	Jacksonville . . . . .	EL 4-0111	Oklahoma City . . . . .	CE 2-8912	Tucson . . . . .	MA 2-7515
Cleveland . . . . .	TO 1-1990	Kalamazoo . . . . .	PI 5-4247	Philadelphia . . . . .	RL 6-4561	Tulsa . . . . .	LU 5-5830
Columbus . . . . .	CA 1-7176	Kansas City . . . . .	BA 1-9229	Phoenix . . . . .	AL 2-0506	Utica . . . . .	2-6126
Dallas . . . . .	RI 2-3981	Knoxville . . . . .	4-0753	Pittsburgh . . . . .	EX 1-3222	Washington . . . . .	ST 3-5448
Davenport . . . . .	6-1623	Little Rock . . . . .	FR 4-0072	Portland, Ore. . . . .	CA 2-2332	Waterloo, Iowa . . . . .	AD 4-1011
Dayton . . . . .	BA 6-2530	Los Angeles . . . . .	TR 3701	Richmond . . . . .	MI 8-8102	Wilmington . . . . .	OL 5-6246
Denver . . . . .	MA 3-1666	Louisville . . . . .	JU 3-5875	Redwood City . . . . .	EM 8-3894	Youngstown . . . . .	RI 4-1203



U.S.S. Albacore whose radical hull design and controls will soon be used on other new submarines to provide greater range, speed and maneuverability. Official U.S. Navy photo.

## LOOK WHAT ELSE NEEDS BENDIX POWER STEERING!



New cars aren't the only application for Bendix power steering. It takes brute force to steer a submarine . . . or to move the control surfaces of the B-58 "Hustler", world's first supersonic bomber . . . and sensitive, positive force to keep a missile on target at speeds of thousands of miles per hour. Bendix power steering does all these jobs.



Several years ago the U.S. Navy invited our Pacific Division to work on the modernization of hydraulic systems for submarines because of its achievements in aircraft

hydraulics. Pacific subsequently introduced new types of hydraulic devices for steering and diving operations and for controlling a score of other all-important submarine functions including periscopes, radar antennas and snorkels.



Self-contained hydraulic control systems for missiles also have been perfected by Pacific Division. These systems detect minute changes in direction, then apply the necessary power to the control surfaces for steady accurate flight.

At South Bend our Bendix Products

Division makes power steering not only for cars and trucks and giant road building vehicles, but also for farm tractors and combines to take the back-breaking effort out of guiding them. To top off the list of applications, a Bendix power steering system for boats will soon be available.

This is a good example of how Bendix engineering ability frequently is able to adapt a basic development to many different applications, showing how diversity pays off. Perhaps there's a clue here to how we might help solve some problems for you.

*A thousand products*



*a million ideas*

# Right off the Wire

A computer-controller system is said to be capable of landing 120 jet planes per hour. Human control can average no better than 40 per hour.



Dockside facilities at SIMPLEX<sup>®</sup> Submarine Cable Division in Newington, N. H. are extensive enough to continuously load two of the largest submarine cable ships simultaneously.



A new plant is reported to cut the manufacturing time of industrial carbon components from eight weeks to eight minutes.



A "building block" technique, using miniature plug-in units, makes it possible to build an electronic computer small enough to go on an office desk.



An iron-aluminum alloy has been made, the behavior of which indicates that there is a relationship between rusting and magnetism.



Some fruit trees have been found to ripen earlier after long exposure to gamma radiation.



At least one of the new "exotic" rocket fuels is being made in solid form and others are expected soon.



A patent has been issued for a radioactive "go-devil" (a device for cleaning pipe lines). If it sticks in a pipe it can be located with a Geiger counter.



It is estimated that malicious damage to street lamps costs New York City a quarter of a million dollars a year. A new plexiglas globe makes this sort of vandalism almost impossible.



Instead of the usual bracing and shoring, inflatable cushions are being used to wedge freight tightly in box cars.

One of the new guided missiles is launched from an automatic base which computes the location of the attacking object, calculates its speed and the proper point for meeting it. It also loads and fires the missile automatically.



A micro-porous synthetic material holds a liquid, such as an ink or lubricant, and gives it off at a controlled rate.



Damage to small delicate parts on a conveyor can be avoided by a new belt that uses permanent magnets to hold the pieces apart.



Glass-reinforced plastics can be strengthened by the use of a special new glass containing copper oxide.



Further information on these news items and on Simplex cable is available from any Simplex office. Please be specific in your requests.



A new wool-like synthetic fiber is water-repellent, quick-drying and less expensive than other synthetics.



A device for measuring the power output of a turbine involves an inner and an outer gear in constant mesh with free space between the teeth. This space is filled with oil on which the pressure can be measured.



Simplex Wire & Cable Co. was the first to adapt interlocked armor (CONDEX) for use with underground cable in 1924.



A logging company is using plastic nails to fasten logs together. They neither rust nor damage saw blades.



Paralyzed fingers can be made to move by means of tiny artificial muscles powered by a carbon dioxide cartridge.

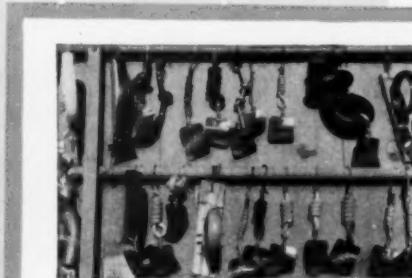
Research conducted by two Simplex scientists in the early 1920's resulted in the first truly moisture-resistant rubber insulation. The isolation and removal of the proteins that are always present in natural rubber was the basis of the now famous ANHYDREX family of insulations.



Foamed aluminum is being made for use as a core in sandwich construction.



An electronic device checks the accuracy of aircraft guns without firing them.



## Rooftop Laboratory

These cable samples, twisted and bent to exert maximum stress on insulations and jackets, are undergoing sun-crack endurance tests atop the Simplex plant at Cambridge. Many of these samples have been exposed to the elements for as long as fifteen years . . . and they haven't cracked yet. This is one example of the many punishing tests which Simplex insulating and jacketing compounds, such as Anhydrex, Thermoplastic and polyethylene, are subjected to before they win final approval.

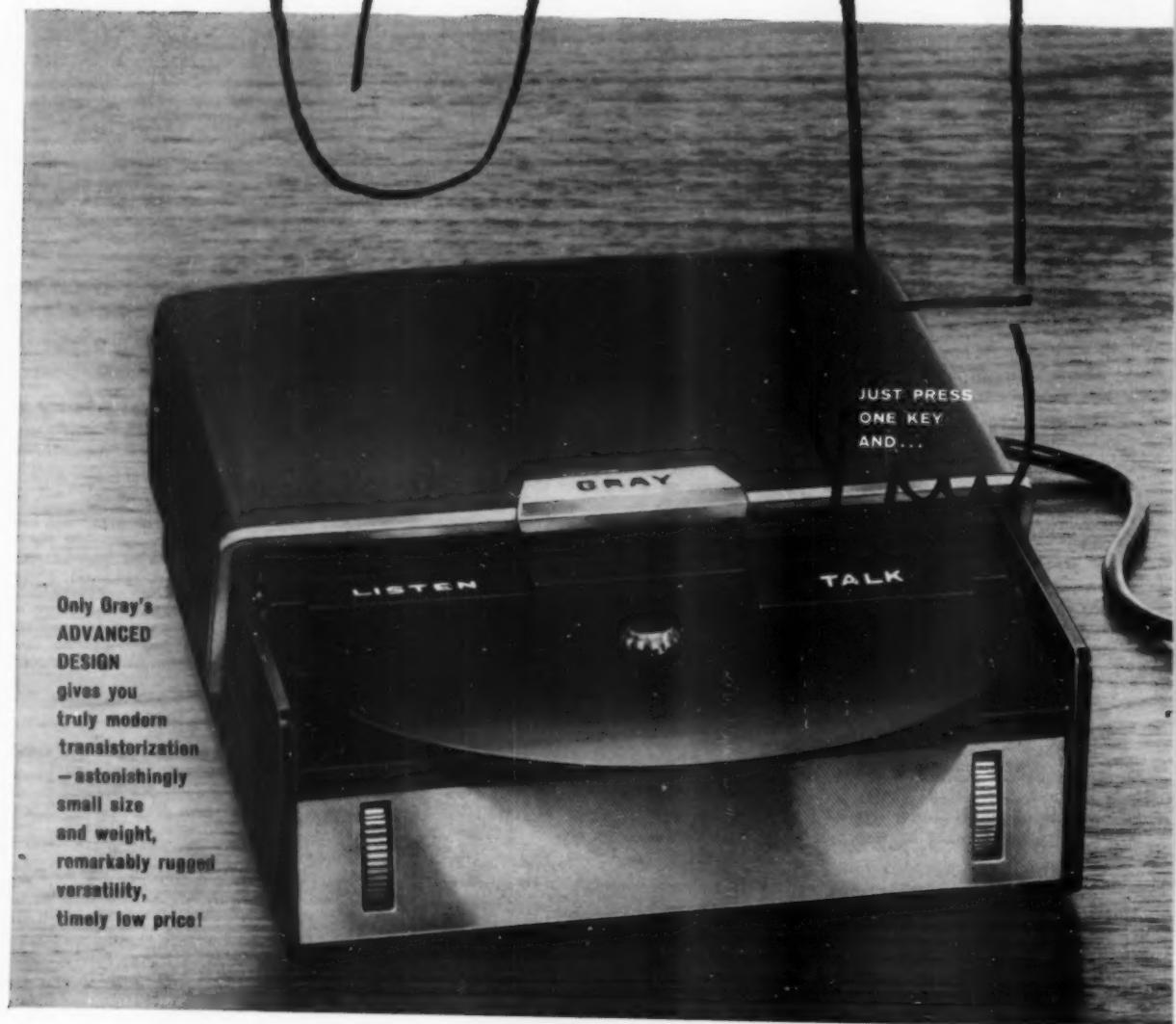
It's all part of a comprehensive system of quality control which has helped make Simplex the leader in cable research and manufacture.

**SIMPLEX WIRE & CABLE CO.**  
Cambridge, Massachusetts and  
Newington, New Hampshire

*Simplex*

Highest quality cables for: Mining  
Power & Lighting • Construction  
Transportation • Communications  
Signalling

# **FINALLY!** The dictating machine for people



who don't like machines! THE NEW "KEY-NOTER"  
**GRAY AUDOGRAPH**

Finally they made one for me...the smallest, lightest, easiest-to-use, most advanced design, disc dictating instrument ever! No tapes, belts, buzzers or warm-ups! I just press one key and talk my work away! Believe me, it puts new pleasure into dictation! The KEY-NOTER is fully transistorized, weighs just 5 5/8 pounds, goes everywhere I go, records everything from a note to a novel! And it also doubles as a transcriber! Thanks to Gray for the new KEY-NOTER. I'd be working twice as hard without it!

P.S. The KEY-NOTER cost me just **\$259.50**

Gray Manufacturing Co., Hartford, Conn.

FREE! Brand new color brochure which pictures the Gray KEY-NOTER in action, describes the many ways it helps ease the load and free you from the burdens of paperwork! Just mail the coupon, and it's yours. No obligation!

Name			
Company			
Address			
City	Zone	State	

Mail this

# Match the conditions in your plant

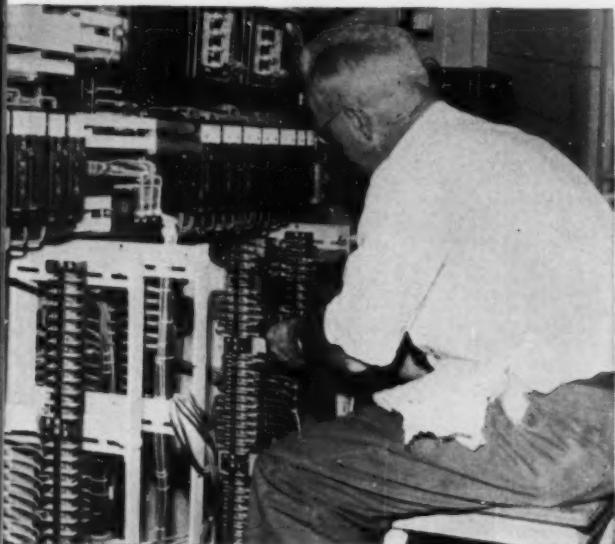
Type and Voltage Rating	Characteristics	General Applications	Installation Methods
<b>RUBBER—Insulated Control Cables</b>			
Rubber-Insulated 600-Volts	The standard Anaconda rubber control cable—with excellent moisture resistance, heat stability and long-aging characteristics.	General-purpose and station control requirements of utilities and industrials.	Can be installed aerially, in conduit, underground in ducts—or buried directly in the earth.
Ozone-Resistant Rubber-Insulated 600-Volts	An ozone-resistant control cable also possessing proved moisture resistance, heat stability and long-aging characteristics.		
<b>THERMOPLASTIC—Insulated Control Cables</b>			
Polyethylene- Insulated 600-Volts	A standard Anaconda thermoplastic control cable with excellent moisture and chemical resistance. Highly resistant to electro-endosmosis. A long-lived cable.	General-purpose control requirements of utilities and industrials.	Can be installed aerially, in conduits, underground in ducts—or buried directly in the earth.
DENSHEATH® Insulated 600-Volts	A standard Anaconda thermoplastic control cable with excellent moisture and chemical resistance. Long-aging performance.		
Anaconda Type PND® Polyethylene- Insulated—Nylon Conductor Cover 600-Volts**	An approved control cable with dependable chemical and abrasion resistance. Features small diameter. Long-aging properties.	General-purpose control requirements of utilities and industrials where space is a limiting factor.	Can be installed aerially, in conduit or underground in ducts.
Polyethylene- Insulated 1000-Volts	A thermoplastic control cable excelling in moisture and chemical resistance. Features heavy insulation thickness. Long-aging characteristics.	Station control requirements of utilities and industrials.	Can be installed aerially, in conduit, underground in ducts—or buried directly in the earth.

\*\*IPCEA voltage rating is 300 volts.

\*Trademark

Lead sheaths are furnished on rubber-insulated control cables if requested. Interlocked armor is available for all types of control cable.

# with these Anaconda Control Cables



**Anaconda's Type ANW-Rubber-Insulated Control Cable.** High-quality product offering peak reliability, outstanding heat resistance. Cable is also highly resistant to moisture, acids, alkalies, other chemicals. Unusual overload capacity and long-aging characteristics. Individual conductor covering and overall jacket of neoprene.



**Anaconda Thermoplastic Control Cable** Multiple-use. Can be installed aerially, in conduit, underground in ducts, or buried directly in earth. Available with polyethylene (600 or 1000 volts) or Densheath<sup>\*</sup> vinyl resin (600 volts) insulation and Densheath over-all jacket. Densheath jackets over polyethylene-insulated conductors on request.



**Butyl-Insulated Control Cable.** Special ozone-resistant control cable. Individual conductor covering and over-all jacket of neoprene provide maximum insurance against moisture and mechanical injury.



**Anaconda Type PND Control Cable.** For general-purpose uses where space is a limiting factor. Allows installation of a 12-conductor cable in conduit carrying a 6 or 7. Individual conductor covering of abrasion-, oil- and gasoline-resistant nylon.

**Permanent Full-Color Coding** on rubber cables, by means of Anaconda's rubber-base coating, assures quick and positive circuit identification. Coding by surface printing, which conforms to IPCEA standards, also available. On thermoplastic cables, full-color coding with pigmented insulation and surface printed coding are likewise offered.

For full information on any of Anaconda's complete line of control cables — including cables engineered for more specialized control requirements — see the Man from Anaconda. A comprehensive technical booklet on Anaconda Control Cables is yours for the asking. Write: Anaconda Wire & Cable Company, 25 Broadway, New York 4, New York.

\*Reg. U. S. Pat. Off. 58339 Rev.



SEE THE MAN FROM

**ANACONDA<sup>®</sup>**  
FOR CONTROL CABLE



# 119 Eyes, \$615,468\* Saved in 5 Years at Pullman-Standard ...another answer to "Does Eye Protection Pay Off?"

At plants of leading car builder, Pullman-Standard Manufacturing Company, wearing of eye protection is a "must". It pays — in eyes saved, pain saved, skills saved and dollars saved. Eye protection equipment is furnished free to all employees, including those needing prescription glasses. (All visitors are furnished Safety Glasses or Plastic Cover Shields for wear over personal glasses.) **RESULT: IN 5 YEARS OVER 67½ MILLION MAN-HOURS WORKED WITHOUT A LOST EYE.**

*Quality* eye protection equipment such as manufactured by American Optical Company featuring *safety standard* frames and lenses is a vital ingredient in achieving performance like this. And it can pay for itself in less than 6 months' time. Call your nearest AO Safety Representative or write us at Southbridge, Mass.

\*Based on average award of \$5,172 for each lost eye for Workmen's Compensation alone in the several states in which Pullman-Standard operates plants.



**JOHN MIMS**

Splatter of hot solder cracked his left bifocal *heat treated* safety lens. Result: Lens took punishment, eye saved.



**ERNEST DEMES**

Hot tar splattered lens; burned cheek, eyebrow, forehead. Result: Eye saved.



**BRUCE REED**

Piece of broken drill struck left lens of safety goggles, continued up to roof of building "singing like a bullet". Result: Eye saved.

Always insist on  
the  Trademark  
on lenses and frames



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Branches in Principal Cities

# BUSINESS OUTLOOK

BUSINESS WEEK  
JUNE 7, 1958



Employment figures for last month show some signs of returning stability—as might be expected from production figures (page 26).

Unemployment—which is the sore point politically, of course—was down by 200,000. Though the figure was still more than 2-million above a year ago at 4.9-million in May, the reduction is as good as might have been expected even in a better business year.

The May rise in employment of 1.2-million (bringing the total holding jobs above 64-million for the first time since Christmas) was as large as has been experienced in a lot more prosperous years than 1958.

It's quite true that more than three-quarters of the gain was accounted for by farm hirings. Yet the rise in non-farm activity was more than most Washington observers had been expecting.

Total employment now is only about a million under a year ago.

A measure of credit must go to construction, which added 217,000 workers in May. The gain since February has been more than 600,000.

**Even manufacturing employment seems finally to have hit bottom.**

The drop from April to May was 60,000, about what might normally be expected for the time of year. Even if business only rocks along, factory employment should gain a bit by October.

That rise, of course, would be from a pretty sorry level—only a little over 15-million now against a 1956 top of 17½-million and the postwar peak of 17½-million late in 1953.

—•—

Pay raises for government employees, both military and civilian, will keep personal income rising in the May-July period—just as larger payments on social security, unemployment compensation, and veterans' benefits did in March and April.

All this adds to purchasing power. By the same token, these steps are helping to lessen the forces of recession.

But they're in the nature of one-shot boosters. Their upthrust won't continue. Only reemployment will provide a lasting cure.

More spendable income at any given time might, of course, prove the thing that turns the tide in consumption and unemployment.

In this respect, the pay rise for government workers is particularly interesting. They're not a huge segment of the labor force, but their jobs are relatively secure. As a class, they don't have to worry too much about being laid off or fired.

**They should be free spenders.** They should be especially free with the lump-sum windfall accruing from Jan. 1 on this retroactive boost.

—•—

Many people feel obliged to change their spending-saving patterns when the outlook gets cloudy. (That's why many qualified observers think a massive rather than piecemeal approach is required now.)

You see the problem in big purchases, things people go in debt for.

# BUSINESS OUTLOOK (Continued)

BUSINESS WEEK  
JUNE 7, 1958

No one has to tell you what has happened to autos. Yet a look at installment debt gives real insight into consumer attitudes.

**People have been borrowing less, repaying more.** In each month, January through April, repayments exceeded new installment loans (a normal thing in January and February, rare in March, almost unknown in April).

Borrowings were slightly less than \$12.4-billion in the four months; that's \$600-million below their level in 1957.

But here's the real point: **People repaid almost \$1.2-billion more than they borrowed.** A year ago, borrowings almost equaled repayments.

Net repayments this year have been 50% higher even than in 1954.

**Installment lenders will tell you that their experience on loans this year has been surprisingly good.** The high rate of repayments, in fact, pretty much tells that very same story.

**But the low rate of new borrowing also tells a graphic story about the whole consumer economy**—a tale of fewer jobs, of smaller overtime that shrinks pay envelopes, of waning confidence.

— • —

**People's attitudes toward borrowing, spending, and saving began to shift in mid-1957 with the onset of recession, as you would expect.**

The annual Dept. of Commerce debt survey, prepared by John A. Gorman for the latest issue of the Survey of Current Business, notes a rise in individual debt last year of only \$14½-billion. That was \$3-billion less than in 1956 and \$10-billion less than in 1955.

**The rise in mortgage debt was the smallest since 1952; the rate of rise in installment debt slowed, particularly after midyear.**

Government figures indicate that **personal saving has been declining ever since the middle of last year** (which helps explain, of course, why retail trade has held up as well as it has). But the Commerce survey also reveals an important shift in the type of savings:

**People put less into more or less fixed assets such as homes; more went into savings banks, savings-and-loan institutions, securities.**

This trend, of course, reflects a greater desire for liquidity.

**Individuals' desire for liquidity has, if anything, intensified this year.** Investments in the savings-and-loans rose \$1.4-billion in this year's first quarter, 34% above the gain for the same 1957 period. Mutual savings banks' gain was 2½ times last year's.

— • —

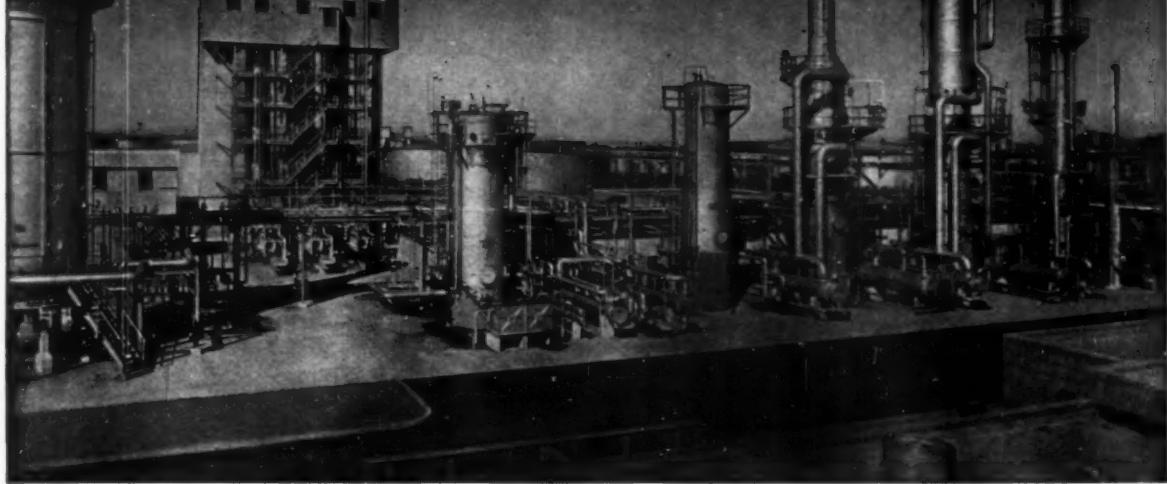
**There's plenty of money around to support an upturn in the economy if only enough people could get their hands on some of it.**

**The Federal Reserve Board reports the end-of-April money supply (currency outside banks plus deposits) at a new high of \$228.4-billion.** That's a rise of \$3.8-billion in a month and \$8.8-billion in a year.

The previous high of \$226.3-billion was set last December.

Contents copyrighted under the general copyright on the June 7, 1958, issue—Business Week, 330 W. 42nd St., New York, N. Y.

# CONTINUITY of ENGINEERING SERVICES



**B**RITISH HYDROCARBON CHEMICALS LIMITED recently placed in operation a Tetramer Plant employing the U.O.P. Process at their Grangemouth, Scotland chemical complex.

Stone & Webster Engineering Corporation, together with its affiliate E. B. Badger & Sons Limited engineered and constructed the new plant as well as the existing facilities for the production of Ethylene, Ethanol, Isopropanol and Detergent Alkylate. Work is now in progress on Polyethylene and Cumene-Phenol Plants.

The charge stock for the Tetramer Plant is propylene from the two existing Ethylene Plants. Part of the capacity of the new plant is used as a charge stock for the Detergent Alkylate Plant.

Stone & Webster Engineering Corporation's world-wide experience and client confidence, typified by its long association with British Hydrocarbon Chemicals Limited, is at your disposal.

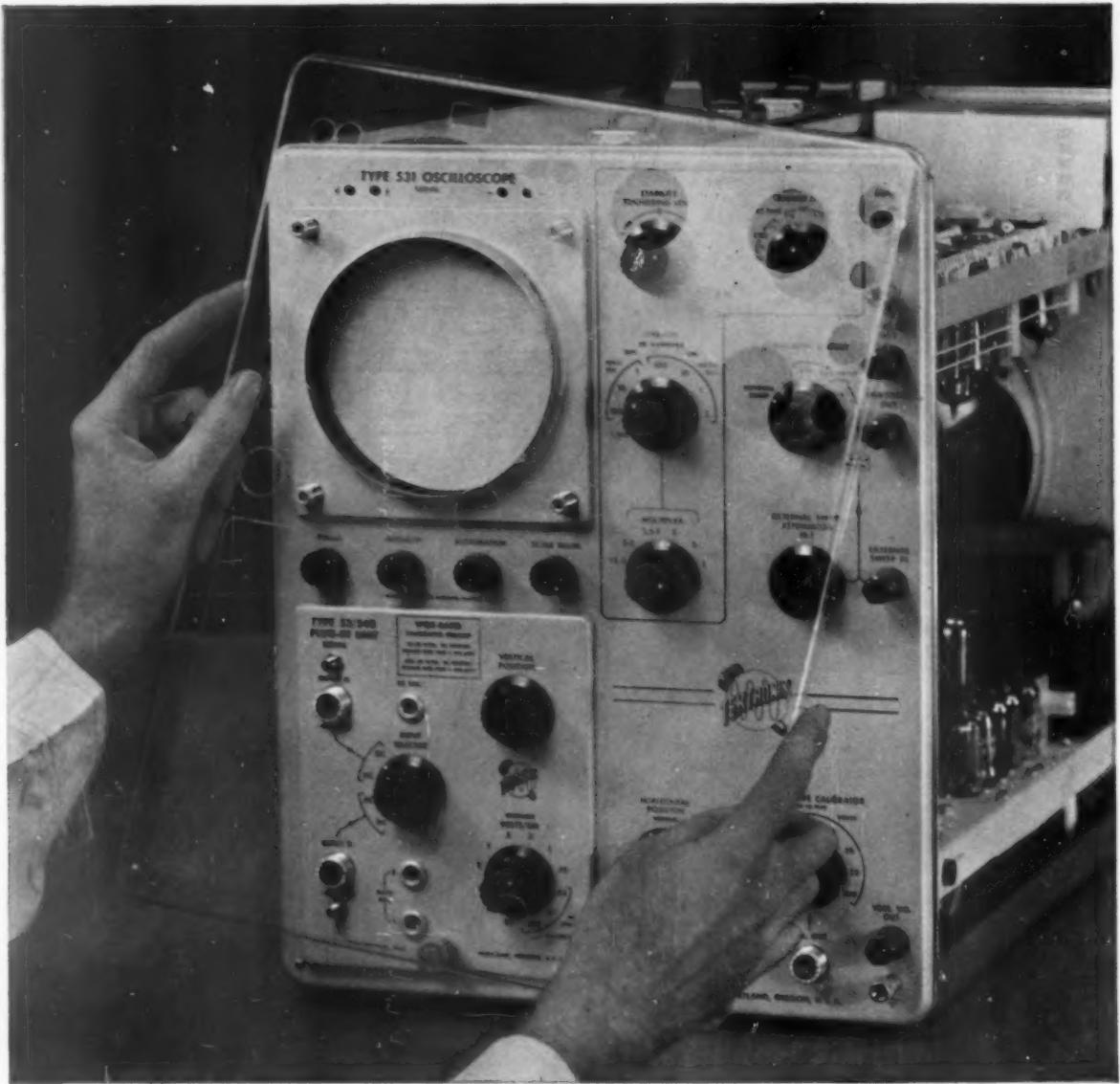
*Write or call us for information as to how our experience may be of assistance to you.*



**STONE & WEBSTER ENGINEERING CORPORATION**  
AFFILIATED WITH E. B. BADGER & SONS LIMITED (LONDON)

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# How versatile **Kodapak Sheet** stands in to cut production costs!



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## **Kodapak Sheet**

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GROUND CONTROLLERS keep track of plane positions by entries on clearance display racks. Safety experts hope to give electronic computers much of this paperwork.



SHORT-RANGE airport surveillance radar sorts out the air traffic that is close by.



LONG-RANGE radar shows positions of planes that are traveling the airways.

## Averting Collisions in the Air

The burden of preventing aerial collisions is about to fall more heavily on the ground controllers at air traffic control centers (pictures). Between now and July 1, thousands of additional flights—both civilian and military—will be added to their daily workload.

At first, it will be a stern test of human capability—the traffic control system is rated as operating at capacity today, when it handles about 17,000 flights out of 50,000 a day. Some Civil Aeronautics Administration officials suggest that extension of ground control

may lead to further delays in and around airports.

The authorities and the airlines hope this won't happen. Even if it does, they see no choice after the latest military-airliner crashes in Nevada and Maryland that killed 61 persons. And they are moving faster than ever to develop machinery that can take some of the tremendous responsibility from the ground controllers.

- **Mechanical Aids**—CAA is already installing Univac computers at the busy New York and Washington traffic con-

trol centers. The agency is preparing to buy more than \$100-million worth of air navigation equipment in the fiscal year beginning July 1, more than \$1-billion worth in the next five years.

Committees in both houses of Congress are holding hearings on a bill to create a federal aviation agency with full authority over traffic control problems—enough to bypass the civil-military bickering that has slowed efforts in the past.

Industry is also testing devices to guard against air collisions. In Wash-

ington, Minneapolis-Honeywell Regulator Co. is demonstrating a lighting system that seeks to make aircraft visible at more than twice the normal distance—in daytime. In California, Aerojet-General Corp. is about to test a device to warn a pilot when another plane is dangerously close.

It's all part of a new grim determination to do something about the collision problem. Mid-air collisions have taken about 500 lives in 160 accidents in the past 10 years. In the past two years alone, the death toll exceeds 300. Last year, pilots reported nearly 1,000 narrow escapes from collision, mostly in broad daylight.

Only the electronics companies can provide the one real solution: total automation of the airways.

## I. The Way It Is

Airlines insist their safety record is still good. Every day, more than 200,000 passengers fly safely over domestic routes. In the past six years, the fatality rate has been less than one per 100-million passenger-miles. That's close to the rate for railroads and buses and only 1/13th of the automobile death rate.

Nonetheless, the airlines are concerned lest the death rate soar as more and more planes fly faster within the limited air space of the U.S.

Complete automation of traffic control is years away, the experts agree, but is essential to take the guesswork out of present systems and relieve the burden on the human eye and brain.

Traffic moves today under two sets of rules:

**Visual flight rules.** The pilot, in good weather, need not be in contact with the CAA ground controllers at all. He is obligated to keep a sharp eye out for other planes and avoid them on a "see and be seen" basis.

**Instrument flight rules.** The pilot files a detailed flight plan with the CAA and may not deviate from a prescribed course, altitude, or speed without permission from a ground controller. In effect, he is assigned a moving block of air space—for a plane flying at 300 mph., it's 50 to 100 mi. long and 1,000 ft. thick—in which he is theoretically protected from intrusion by other planes.

**Where It Fails—**This mixture of rules leaves room for deadly confusion. Even the instrument flight rules fail to guard against human frailty. Many ground stations still lack adequate radar, and the controller has no precise idea of each plane's location. He must mentally project the latest position reports as they are placed before him on slips of paper.

Most important of all, in good weather there's nothing to prevent a pilot flying under visual rules from in-

vading the instrument pilot's allotted air space. The mingling of rules has obvious hazards when 600-mph. planes are using the same aerial highways as 80-mph. planes.

In both the Nevada and the Maryland crashes, airliners flying under instrument rules were hit by military jets operating under visual rules.

## II. Step by Step

Why not put everybody under instrument flight rules—or at least keep the military planes out of the air space used by civil pilots?

Congressional committees asked these questions following this year's tragic collisions. The reply from CAA Administrator James Pyle and other government spokesmen was this:

The traffic control system would fall apart at the seams if ground controllers tried to keep track of all the 2,000 airliners, 40,000 military planes, and 67,000 private and corporate aircraft in the U.S.

- **First Steps—**However, the government and the airlines are moving as far in this direction as possible:

- The Air Force agreed to put all "non-tactical" flights under positive CAA ground control unless they plan to fly above 20,000 ft. Training and test flights will be conducted mostly off the civil airways, in air space reserved for just such use.

- The Air Transport Assn. announced that the nation's airliners, beginning July 1, will operate all flights above 10,000 ft. on instrument rules. Airlines have been observing this practice above 18,000 ft. since May, 1957.

- The Civil Aeronautics Board announced creation of the first three super-skyways linking Los Angeles and San Francisco to New York and Washington. Effective June 15, all flights between 17,000 and 22,000 ft. in these 40-mile-wide corridors must operate under instrument flight rules. Later, the top limit will be raised to 35,000 ft. to protect the jet transport planes that, after coming into service late this year, will share the air with military jets.

## III. Latest Hardware

One of the most interesting approaches to solving the collision hazard is the collision-warning device, on which several companies are working. These generally involve adapting the infrared "seeking" device used on missiles.

Aerojet-General, a subsidiary of General Tire & Rubber Co., appears to have the inside track with the airlines. If this month's tests work out, 10 of the devices will be installed experimentally on scheduled airlines—and general use may not be far behind.

- **More Control Equipment—**However,

experts agree that a modernized system of controlling traffic in the air is the real solution. Such a system is already in the process of creation.

The Administration, after much study, has laid out a blueprint for airways modernization. Under this plan:

- **CAA,** which does business with 150 or so manufacturers, will spend well over \$1-billion dollars in the next five years for hardware that is already available—items such as radar, radar beacons, instrument landing systems, approach lighting, and radio homing facilities.

- **The Airways Modernization Board,** operating at White House level, is overseeing a research and development program to turn advanced scientific knowledge into useful equipment.

- **CAA Program—**Even the CAA's more prosaic five-year program will work tremendous changes on the airways.

**Radar.** With the 100 long-range radars slated for installation by 1963 (40 already are in operation), the controllers will have a firmer hand on traffic flow, be able to put at least four planes in the air space now restricted for one.

In addition, about 100 more advanced radar beacons will be installed. Unlike regular radar, these operate well in stormy weather and can accurately identify properly equipped planes that show up on the scope.

CAA also plans installation of 380 radars for surveillance of traffic on or near the airport. These will allow pilots flying in heavy traffic within 20 mi. of an airport—good weather or not—to request a "radar advisory" on steering clear of other planes in the area (85% of mid-air collisions have occurred within 5 mi. of an airport). A test of this service will be offered in the Indianapolis area starting June 23.

**Air navigation facilities.** The five-year program calls for installation of \$248-million of improved very-high-frequency radio range installations. These will give the pilot both distance and direction from his destination.

**Communications.** Ground controllers are rapidly being equipped with facilities for direct communication with pilots instead of going through a relay. However, the real goal is the automatic data link—to cut conversation between pilot and controller to a minimum.

- **Automatic Link—**The automatic data link, which will begin to come into operation within five years, will work something like this:

Ground station equipment electronically interrogates each aircraft in a given zone as to identification, speed, bearing, and other relevant data. This is fed, with information gathered from radar, into a computer that digests the data and warns the operator of potential collision situations.

# Bargaining Pause

**Auto contract talks reach a lull as neither companies nor UAW rush to change no-contract situation.**

The automotive industry and the United Auto Workers cautiously maintained a new relationship this week. Major plants operated without a union contract for the first time in more than two decades. The transition was made smoothly, with nobody trying to take advantage of the lack of labor pacts.

• **Standing Pat**—At midweek, neither the industry's Big Three companies nor UAW seemed in a hurry to change this work-without-a-contract situation. The pressures for a quick settlement hadn't really eased from a week ago (BW—May 31'58, p18), but employers and union were standing pat.

The union showed no edginess when negotiations came to a weary and expected pause as contracts ran out. "Time is on our side," UAW's Pres. Walter Reuther said. Meanwhile, he commented, it will be "good for the union's soul" to come into closer contact with auto workers to collect dues.

The companies are counting on Reuther being wrong. When contracts expired, the Big Three announced operating rules that maintained intact almost all provisions of the terminated agreements—the major exceptions being the union shop, checkoff of dues, and provisions for an umpire to hear final grievance appeals.

• **Appeal to Workers?**—At the same time, the companies still offered to sign a new contract for production workers at the average 9.1¢ an hour increase that would be payable now if 1955-58 contracts had been extended.

The companies recognize that if talks go on all summer, they will face a strike threat at new model time. They apparently are willing to take this risk.

Management's theory is that time can also work against UAW. Workers may cause such turmoil in plants that operations will have to be shut down; if a labor dispute could be blamed, unemployment compensation and SUEBenefits could be shut off, putting a squeeze on UAW. Even if this doesn't happen, so many workers will be laid off or on short weeks this summer that financially pinched unionists might be reluctant to strike in the fall.

• **AMC Pact Extended**—Shortly after the termination of Big Three contracts last weekend, American Motors and UAW met for contract talks. AMC, running briskly ahead of 1957, and the union quickly agreed to extend their contract indefinitely.



## Where Art Teams Up With Banking

Making a bank's quarters into an architectural shrine may be costly, but it can go hand in hand with complete modernization of the bank's facilities—and by providing a bank building that people talk about, it can "give added impetus to development."

That's the considered opinion this week of Pres. Clifford C. Sommer, as his newly remodeled Security Bank & Trust Co. of Owatonna, Minn. (above), began a series of celebrations. These will dedicate the remodeled and refurbished 50-year-old building both as a modernized banking center and as a monument to its original designer, Louis Sullivan—pioneer of American skyscraper architecture and mentor of modernist Frank Lloyd Wright.

• **Art and Business**—The bank hadn't thought of it quite that way when it started out two years ago to increase the space and operating efficiency of its rapidly growing business. (Owatonna, population 13,225, is in a thriving dairy farming area 65 miles south of Minneapolis; its own industries include jewelry, farm implements, and tools.)

But about 18 months ago Minnesota architectural groups, concerned about what might be done with a building of historic and artistic significance,

approached the bankers. Bank officials, already aware of the "Sullivan tradition," listened, became enthusiastic—and decided to follow the Sullivan style throughout. They engaged a "Sullivan expert"—Harwell H. Harris, of Fort Worth—as consultant for the remodeling which had now become also a restoration. Pres. Sommer became an ardent promoter of Sullivan ideas and techniques, with full backing of his directors and Chmn. Mark H. Alexander.

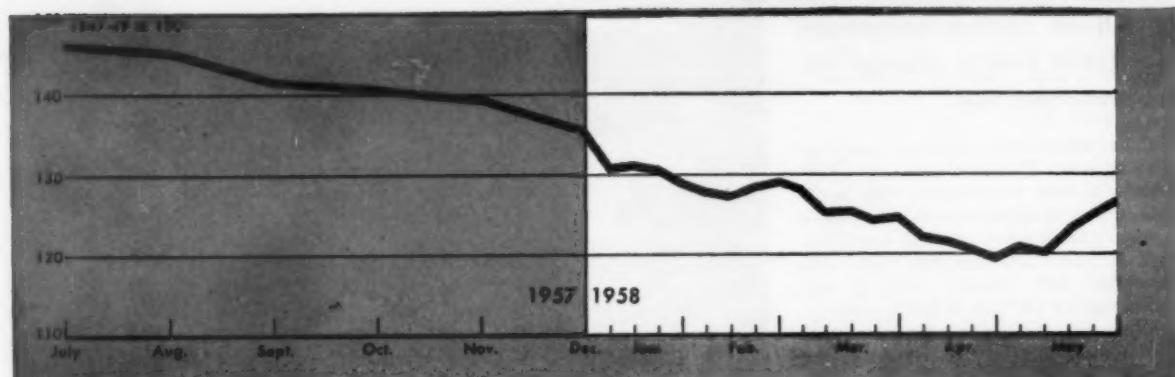
• **Made Over**—The bank was one of Sullivan's most ornate jobs, and the decision meant added work—in cleaning and moving old odd-sized bricks, matching tones of old and new wood finishes, having the jewel-like wall and ceiling decoration repainted in 200 color shades by church decorators, scrubbing (with shaving cream) the big pastoral mural of a farmer with his cows.

At the same time, the bank shifted offices, moved the vault, added tellers' cages and counter space, private booths for safe deposit customers, more safe deposit boxes—extended working space back into an adjoining building.

The whole job cost "in excess of \$200,000"—somewhat more than a conventional remodeling would have cost, says Sommer, but "not an extravagant amount more," in the name of art.

# You Begin to See Some Leveling Out

In Business Week's Index.



## The Gain Is Small but It's Real

Industrial activity stopped declining in April and is now climbing.

This is the cheering news told by the BUSINESS WEEK Index, which is based on a wide range of weekly industrial data. In the charts on these pages, you can see the small but real improvement registered by the over-all index and some of its key components.

There's still a question how strong or steady this revival will be. Most of the important weekly statistics of U.S. production have either leveled out in the last month or are beginning to show solid gains. However, there are still some important areas of the economy—nonferrous metals is one—in which production is being cut.

- **Summer Wilt**—Over-all, the tempo of production should continue to quicken through this month. But in July, widespread vacation shutdowns and auto changeovers may bring a greater than usual summer slack. This slowdown may bring another dip in the BUSINESS WEEK Index in July, unless the current uptrend spreads and perks up consumer buying.

The present rise in the index is mainly due to substantial gains racked up in May by heavy construction contract awards, steel production, and auto and truck output. But even the other key indicators—carloadings, petroleum production, and electricity output—have flattened out or show small gains.

- **Contract Awards**—The most hopeful—and volatile—element in this pickup has been the sharp uptrend in awards of heavy construction contracts, compiled by Engineering News-Record, a McGraw-Hill publication. These contract lettings foreshadow a high rate of building activity and should help employment, steel production, and building materials.

Contract awards in May were the

highest for any month since July, 1956. They topped the year-ago month by almost 33%. The decline in business capital spending has meant a sharp drop in awards for industrial buildings. However, lower interest rates and continuing needs have stimulated a large volume of contract lettings by state and local governments for schools and other public works and by private interests for large housing projects and commercial buildings.

On the other hand, contract awards for highways are running no higher than last year, despite the much-publicized speedup in the federal highway program. Many states have cut back their own programs in order to concentrate on expanding the federal road system. Still, the figures represent a real gain, since average bid prices for highway contracts are running substantially lower than last year.

- **Steel Rate Is Up**—From late April to this week, steel production jumped 30% to a scheduled rate of just under 61% of capacity. June orders are strong enough to indicate a rise of a few more points in the steel rate by the end of the month.

Part of this upturn undoubtedly comes from hedge buying by steel customers to beat an expected price increase on July 1. The rest of the gain reflects better farm demand, the construction industry's needs, and the depletion of inventories by many steel users. Most steelmen expect another slack period in July before the auto industry starts calling for more steel in August for the 1959 generation of passenger cars.

Production of cars and trucks in May ran 10% ahead of the previous month, but it was still far below what the industry likes to regard as normal. No improvement is in sight until the 1959

models go into production in August, unless customers suddenly mob the showrooms. Dealers still hold a two-month supply of cars, and Detroit is scheduling June output below the May rate of 350,000 cars.

- **Oil at an Ebb**—Crude oil production is touching bottom for 1958, largely because of stern limitations imposed by the Texas Railroad Commission. For three months in a row, Texas has held output to 8 days' production.

Refineries have cut their runs accordingly. Fuel oil stocks have been brought low enough to suggest a stepup in crude oil demand and refinery operations in the second half-year. Gasoline stocks have been cut close to the year-ago levels, with the peak consumption period still ahead.

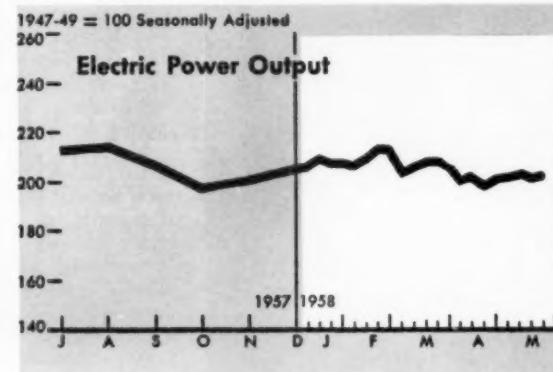
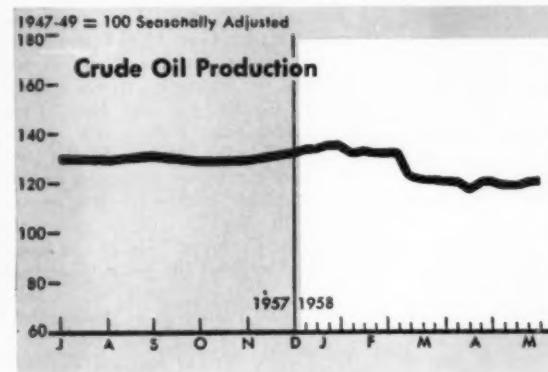
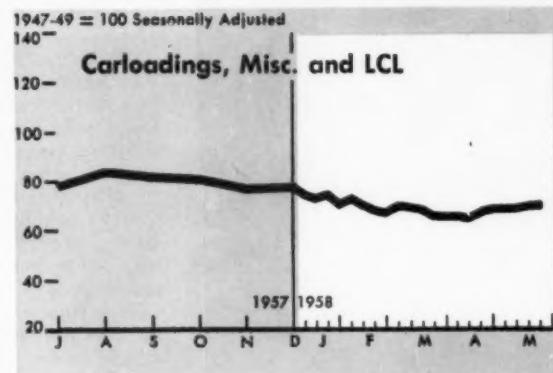
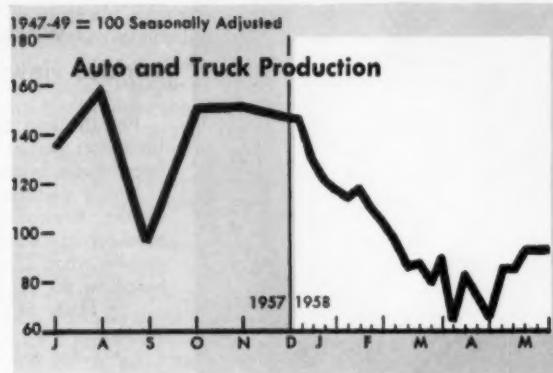
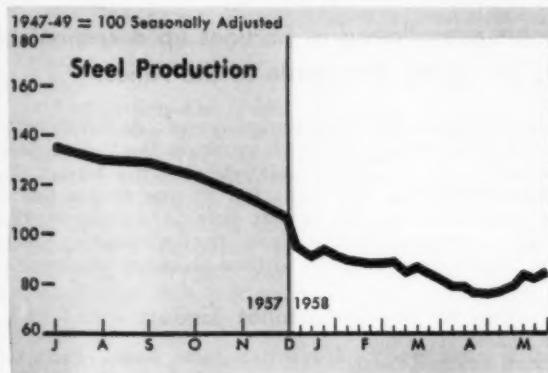
Improvement in the inventory picture is making it possible for refiners to increase their output rate, and at least one big refiner is buying more crude this month. Oilmens now expect Texas to raise its production allowable next month.

- **Freight and Power**—The decline in carloadings and electric power output—two broad-gauged indicators of industrial activity that are included in the BUSINESS WEEK Index—was checked during April.

Carloadings in the miscellaneous and less-than-carload categories serve as an index of shipments of finished goods. They have shown small increases since April. This suggests that more industrial products are moving from factories and warehouses into the marketing outlets. Other carloadings have also picked up a bit since early May, with increases in shipments of grain, iron ore, and coal.

Demand for electric power has also leveled off since April, checking a general downturn. Output is running

## and in Several Major Components of This Index



about even with year-ago figures instead of showing the usual year-to-year gains. But some industries that use electric power heavily, such as aluminum, have cut production this year, and it takes a lot of gain in home and commercial consumption to make up such losses.

• **Industrial Picture**—Besides the encouraging accent of some of the broad trends charted on these pages, there are hopeful signs in individual industries, some of which have been having their private recessions.

The textile industry, for example, has been in the dumps for two years. Now it looks as if the long-awaited recovery

will come by fall, if auto and tire business pans out. Prices for all the synthetics have firmed up. Cotton print cloth has mildly reversed its decline; the 80-square fabric is being quoted at 17½¢ a yard, compared with 17¢ in April.

Homebuilding is another key industry that's counted on to stage a comeback in the second half. So far, the increase in the supply of mortgage money and the liberalization of VA and FHA terms have stimulated the sale of homes that had been going begging, but not enough new homes have been launched to lift the output of lumber and other

building materials. If private housing starts are to reach the 1.1-million annual rate that's widely predicted for the second half-year, the pickup will be felt all the way back to the lumberyards and the gypsum mills.

The farm machinery industry stands to profit from the increase in farm income that's already shaping up. The first increase in sales of farm equipment is serving chiefly to draw down dealer stocks and factory inventories. But if farmers continue to get a fatter share of the national income, production of farm machinery may have to be accelerated.



GEN. DE GAULLE got a free hand from Parliament, then rounded up a cabinet of diverse elements (pictures on facing page).

# De Gaulle Sets Out to

Western fears are allayed as he lines up a cabinet of various viewpoints but mostly favorable to the Allies.

For the first time since the postwar liberation period, France is filled with hopes for a brighter future.

Newly installed Premier Charles de Gaulle, flanked by a unique team of ministers (pictures), is boldly betting he can do what 25 postwar cabinets have failed to do:

- Halt France's backbreaking colonial wars.
- Give the country a stable system of government.
- Put France's wobbly finances in order.

Whether de Gaulle can bring off any or all of these objectives is anybody's guess at this early stage. But he commands more power and authority than any other premier since the war. He rode into power as the divided nation's only alternative to civil war. That's why many Frenchmen are saying that their country, after 13 years of fumbling, will strike a firm course under the general's leadership.

• **New Hope**—After years of despair, this optimism is a new factor on the French scene. This feeling is also shared by most Western diplomats in Paris—though in a more guarded fashion. No one, of course, liked the way the army forced the issue. But after weeks of possible civil war, Western ambassadors, like most Frenchmen, greeted de Gaulle's takeover with relief.

Moreover, after watching de Gaulle's initial moves, Western observers felt even better. In his public and private statements, de Gaulle indicated that under his rule France would remain "democratic" and stick by its Atlantic alliance commitments. By midweek, diplomats were saying that, while France may now prove to be a more testy partner, its allies stand to gain if de Gaulle's government manages to strengthen the country.

• **Won't Be Balky**—This, of course, doesn't mean that de Gaulle will docilely follow the lead of his Western allies. You can expect him, for example, to keep pressing for a summit meeting, despite the fact that such a conference has lost favor in Washington and London. Some Paris sources say he might even approach the Russians independently—more for tactical reasons than from any desire to make a separate deal.

On NATO matters, de Gaulle is likely to seek a bigger role for France. He'll try to do this by stepping up France's efforts to produce nuclear weapons.

On European unity, de Gaulle won't scrap such treaties as the Coal & Steel Community, the Common Market, and Euratom. But he may draw a line at any further political drawing-together under these treaties, limiting them strictly to their economic objectives.

## I. Cabinet Lineup

It's within these limits, Paris observers agree, that de Gaulle will lead France over the next six months. The best guarantee that he won't stick his neck out any further is the way he has gone about the task of lining up his cabinet.

For one thing, he has not had to stuff his cabinet with an assortment of party labels. Instead, he has staffed it not only with politicians but also with capable civil servants and experts in various fields. Of 15 ministers named by midweek, 10 are politicians, four are civil servants or technicians, and one is a literary figure—novelist and art critic Andre Malraux. As de Gaulle adds to his entourage, it's expected he'll draw more heavily on non-politicians.

• **Reassuring Names**—With men like Socialist leader Guy Mollet and Conservative leader Antoine Pinay in top positions, for example, it isn't likely that de Gaulle will cut loose from NATO and edge France out of the Common Market. While Mollet and Pinay may clash over economic policy, both are firmly convinced that France belongs in NATO and in groupings such as the Common Market and Euratom. And without the political support of these two key men, de Gaulle couldn't rule France in a "democratic" manner, as he says he wants to.

De Gaulle further soothed Western anxiety and startled the diplomatic world with the appointment of 51-year-old Maurice Couve de Murville as his Minister of Foreign Affairs. A career diplomat, Couve de Murville is France's first postwar foreign minister who was not drawn from politics. Formerly ambassador to Bonn, he is a staunch advocate of the Western alliance and the West European unity movements.

• **Nationalist**—Scanning de Gaulle's cabinet lineup, Western observers at midweek could find only one top minister who reflects the Premier's more extreme nationalistic views and who thus could cause trouble. This is Gaullist Senator Michel Debre, named to head the Justice Ministry. Debre

# Cure France's Ills by Autumn

would like to see France become a nuclear power, thus enabling it to play a more independent role in its foreign policy.

• **Fast Action**—De Gaulle is setting heads whirling in Paris not only by his unique cabinet but also by brushing aside traditional rules of French politics. Within 24 hours after his investiture last Sunday, the 67-year-old general got Parliament to vote him sweeping emergency powers for six months—and then to go on vacation until October. Freed of parliamentary strife, de Gaulle's cabinet is now digging in for a summer of feverish activity.

## II. Feverish Summer

The Algerian solution is the key to the de Gaulle government's future. Failing to solve this, de Gaulle's domestic program won't get off the ground. As a first step, de Gaulle flew to Algeria on Wednesday for an on-the-spot survey. Some reports from Paris say he'll try to meet Tunisian Pres. Habib Bourguiba and Moroccan Sultan Mohammed V.

De Gaulle's idea for an Algerian solution reportedly would fit Algeria into a North African federation that includes Tunisia and Morocco. Like many other Frenchmen, de Gaulle doesn't believe that a policy of integrating Algeria with France can work—or even makes sense. He would promise Algeria some measure of domestic autonomy within the federation now, with more leeway later.

• **Opposition**—First, de Gaulle will have to stand up to the extremist French settlers, who are sure to reject the federation concept. Much depends on his ability to get the French army's backing in a showdown. If he feels the army is with him all the way, he won't hesitate to push his federation idea even if the French settlers balk.

Of course, you can't forget the attitude of the rebel National Liberation Front (FLN). It may not buy de Gaulle's federation plan. This plan would knock out their goal of total and immediate independence for Algeria, with no strings attached. But Paris, in these optimistic days, is betting that de Gaulle will win them over to his idea. On his arrival in Algiers this week, de Gaulle promised elections in Algeria within three months with equal voting rights for all.

By ending the nearly four-year-old Algerian conflict, de Gaulle would greatly improve his chances of achieving his other two chief objectives; finan-

cial stability and constitutional reform.

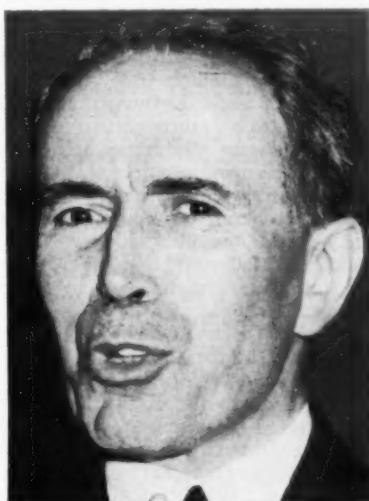
• **Financial Moves**—On the economic front, Finance Minister Pinay is preparing a series of emergency measures designed to slow down the French economy, to cut imports. Also in the works is a big domestic government loan—probably for at least \$700-million—which should squeeze the money market even tighter.

Tax increases are ruled out. With little chance that France can meet its initial tariff reduction commitments in the Common Market, financial experts are looking for at least a more variable official franc rate, and for at most another devaluation. In any case, France's

foreign credit is expected to be exhausted by November—or sooner.

• **Constitutional Reform**—On reforming the constitution, de Gaulle has already won a significant victory by getting Assembly approval to submit reforms directly to a public referendum rather than first to Parliament. He will try to push through a system that would free the executive from Assembly domination.

De Gaulle says he will be ready for a public referendum next fall. If by that time he is well on the way to solving the Algerian war, his chances for reforming the French Republican government will look bright.



CONSERVATIVE leader Antoine Pinay is a balancing force in the new cabinet.



SOCIALIST leader Guy Mollet is not far from Pinay's views on foreign affairs.



DIPLOMAT Maurice Couve de Murville is first non-political foreign minister since war.



MAN OF LETTERS Andre Malraux is another non-politician named to cabinet.

# Now Inflation Gets the Spotlight

● Though recession is still the fact of life, fear of coming higher prices is growing—and three Congressional groups are tackling the problem of what to do about it.

● They are turning up a variety of proposals, ranging from holding back the upward push of wages to consumer credit controls and changes in depreciation allowances.

● One hits directly at existing business practices—it's a proposal to rewrite antitrust laws to make administered prices and so-called "price leadership" illegal.

Recession is the clear and present fact of life to government administrators and lawmakers—as it has been for six months now.

But paradoxically, fear of higher prices is on the rise at the same time. It is pushing hard for first place in the attention of Washington policymakers, and it is the focus of attention for three major Congressional investigations that seem destined to run on for months.

By all the rules of ordinary political warfare, these Democratic-controlled Congressional committees should be examining the recession with an eye on voter appeal this fall. Instead, they are bearing down on the dangers of inflation sometime in the future, and turning up a host of proposals for trying to ward it off or to deal with it if it comes.

• **Bipartisan**—The trend holds true for the Administration as well as Congress. Last week's decision against a general tax cut is one reflection of the inflation fear. Pres. Eisenhower is using press conferences and public addresses to point up his own dislike of inflation. He and Defense Secy. McElroy have hinted—or directly warned—that controls might someday become necessary.

But neither the Administration nor Congress has any love for direct controls. What Congressional investigators would like to find would be anti-inflation weapons more palatable politically than controls and more effective than the general credit restrictions of the past.

Ideas that have come up range from cracking down on union labor's power at the bargaining table to amending the antitrust laws to make administered prices and so-called "price leadership" illegal. But they all are geared to the belief that the kind of inflation experienced during the 1955-57 boom, and the tendency of some prices to keep on rising during the recession, are

signs of fundamental changes in the U.S. economy.

• **Three-Way**—These three sets of hearings are wrestling with the problem in one phase or another:

• Sen. Estes Kefauver's antitrust and monopoly subcommittee of the Senate Judiciary Committee is investigating the pricing practices of industry. So far the committee has produced a report based on its findings regarding steel; reports on autos and roofing materials will follow. The group plans to go into farm machinery and other products later.

• Sen. Harry F. Byrd's Finance Committee is taking a broad look at the financial condition of the U.S. Because of Byrd's own attitude, this hearing is continuing to inquire into inflation and its causes, though the recession arrived since hearings began last year.

• Rep. Wright Patman's Joint Economic Committee is looking at prices and their function in the economy. So far, it has heard from professional economists; the committee staff is now preparing a report based on hearings last month. Later, spokesmen for industry and labor groups will be called in, and the issue of who is chiefly to blame for the price increases of recent years will be fought out.

• **Threat**—Probably the most direct threat to existing business practices that has come out of the hearings is the theory that the antitrust laws should be rewritten. Here's how this idea is being developed by Sen. Kefauver's subcommittee.

The present antitrust laws, of course, make it illegal for companies to get together to fix prices. The federal grand jury indictment this week of 29 oil companies (page 34) is an example of the present law in operation. But to get a conviction, the government must prove that the companies actually participated in a conspiracy—that collusion was present.

In its report on the steel hearings, the subcommittee majority announced it would call the chairman of the Fair Trade Commission and the Justice Dept.'s antitrust chief to determine whether price increases in the steel industry in the past couple of years violated existing law. The theory of the majority apparently is that the practice of steel companies in raising prices about the same amounts at about the same time may itself constitute collusion.

In the opinion of most government antitrust lawyers, this is not true. They agree the industry follows a pattern of price leadership but deny that this alone indicates a conspiracy.

In that case, the subcommittee majority believes, Congress may want to rewrite the laws. Two Republicans on the subcommittee—Sen. Everett Dirksen (R-Ill.) and Sen. Alexander Wiley (R-Wis.)—vigorously dissent.

• **Business View**—Sen. Byrd began his study convinced that big government spending is a prime cause of inflation, but he has gotten little support for this view from bankers and businessmen. In a series of answers to a questionnaire, which Byrd released this week, several corporation executives selected the bargaining power of labor as a prime cause of price increases.

Most of the executives replying listed escalator clauses in union contracts as contributing to inflation, but Harlow Curtice, president of General Motors, took sharp exception. GM was one of the first corporations to write escalator clauses into its union agreements.

• **Consumer Controls**—It's doubtful whether the Byrd hearing will result in important legislation, but several proposals that crop up persistently at Rep. Patman's Joint Economic Committee hearings are to get increasing attention.

One of these is a perennial—the idea of giving the Federal Reserve Board stand-by power to control consumer credit terms.

One argument runs that if restraints had been put on installment credit in 1955—when auto sales on credit soared—the current dip in autos would not be so severe.

Back in 1956, Arthur Burns, at that time chairman of the Council of Economic Advisers, wanted the Administration to back consumer credit controls. He was blocked chiefly by George Humphrey, then Treasury Secretary, and nothing came of the proposal except an elaborate study by the Federal Reserve. Since then, the idea has gained ground.

Recently Alfred Hayes, president of the New York Federal Reserve District

Bank, looking back at the tight money policy of 1956 and early 1957, said the power to invoke controls over consumer credit might have been a help. If Congress or the Administration makes the first move, the Fed's Board of Governors might back the idea—though reluctantly.

• **Business Restraints**—If consumer credit is put under control, there will be a move to give the Treasury Dept. power to invoke variable depreciation allowances on business taxpayers, too. The idea is to put business under some kind of restraint during a boom, if consumers are going to be told to slow down.

The theory is to reduce the pace at which new property can be written off for tax purposes during booms, then ease up during recessions. Treasury officials don't like the idea.

The notion that businesses should be required to come before Congress and justify major price increases—first suggested by Sen. Kefauver—will be pushed by some labor economists when they get their day before the Joint Economic Committee. There's no thought here of having Congress or any arm of the government actually approve or disapprove price increases, the way public utility commissions do. Labor strategists know this would involve wages along with prices, and they don't want that. But some labor thinkers believe that industries would often forego increases rather than appear before a public body.

• **Employment and Prices**—A revision of the language of the Employment Act of 1946—which commits the government to seek "maximum" employment—may be attempted. The idea is to have stable prices added as a specific goal of federal policy. This proposal was defended by a panel of economists, and has also generated a smattering of support from businessmen. It is opposed by Raymond J. Saulnier, chairman of the Council of Economic Advisers.

The employment act is silent on what should be "maximum" employment, but something less than 100% of the labor force was clearly in the mind of Congress when the law was adopted. In practice, 4% unemployment has not been considered particularly alarming, but 5% has been read as a clear danger signal. Anything like the present 7.5% is clearly unacceptable to government officials.

A respectable body of professional economic opinion holds that 5% unemployment on a regular basis might be sufficient to put an end automatically to creeping inflation. The idea may be discussed when the Joint Economic Committee hearings are resumed—but it is political dynamite in a recession year.

## Business Prescribes for Itself

Replies of 28 corporate chiefs to government questionnaire show hope that the recession is hitting bottom. Most advocate tax reforms rather than across-the-board cuts.

This week, the Senate Finance Committee published replies by 28 leading industrialists and financiers on a questionnaire that asked, in effect, How's Business? From the 184 printed pages of replies from some of the biggest names in U.S. business can be distilled a consensus that goes something like this:

• The current recession, although troublesome and lingering, appears to have done its worst and is not going to degenerate into a depression.

• The federal government, having eased monetary restrictions and stepped up spending plans in essential areas, should proceed cautiously—if at all—toward priming measures such as tax cuts or extravagant public works outlays. Inflation, the business leaders reason, will be enough of a problem without having government encourage it in any way, no matter how well-intentioned.

• Organized labor must be put under more restraint if a semblance of over-all economic stability is to be attained.

• Tax reform, as opposed to an immediate anti-recession tax cut, should become a key Congressional goal, with emphasis on encouragement of capital formation and risk-taking investment.

While many of the answers were drafted several weeks ago, most of the businessmen, if they spoke about current conditions, managed to sound at least faintly optimistic about the depth of this recession. J. Ward Keener, president, B. F. Goodrich Co., writes that "I am of the opinion that it would be the best part of prudence to defer major governmental action temporarily, with the possibility of healthy gains in the level of business activity by the end of 1958."

• **On Tax Cuts**—Because of qualifiers attached, not many of the 28 answers permit hard and fast classification on such issues as whether a tax cut is justified as an anti-recession maneuver. Most of the executives see no economic need for such, and some strongly oppose it.

But there are some exceptions. Harlow H. Curtice, president, General Motors Corp., says that "the simplest and most effective move . . . would be to cut taxes across the board until the recession ends." And James S. Rockefeller, president, First National City Bank of New York, replies that "the

most promising way to stimulate business is to relieve the tax rates which are most constrictive of enterprise."

Philip Sporn, president, American Gas & Electric Co., advises that the recession could be contained only by "vigorous action . . . taken promptly" and "I do not exclude an immediate tax cut from this action." C. R. Smith, president, American Airlines, advocates a tax cut and, like Sporn, sounds a note of caution about underestimating the recession.

• **On Inflation**—One of the most definite questions asked by the committee was, "Shall we accept . . . a gradual inflationary trend [for the future] as desirable or necessary to achieve and maintain a full employment goal?" The overwhelming majority of answers boil down simply to a resounding "no" vote against any deliberate inflation.

However, Henry J. Kaiser, president, Kaiser Aluminum & Chemical Corp., in the briefest of all the 28 replies, writes that "the beast of deflation can be worse than the beast of inflation."

J. T. Leftwich, president, F. W. Woolworth Co., observes that "it is not a matter of choice any more. As long as the Employment Act of 1946 remains on the books we have the basis for persistent inflation."

A response more typical of what appears to be the majority sentiment comes from Ralph J. Cordiner, president, General Electric Co.: "It is true that high and rising levels of employment may, if national policy permits, be accompanied by inflation. Such inflation should . . . be recognized as an effect of misguided policy [and] combated."

• **On Labor**—Many of the 28 blamed labor for an undue contribution to the recession, via an inflationary wage push. A few put more blame on the government for drastic cutbacks in defense expenditures last fall, when it was already apparent that private expenditures for plant and equipment were going to sag and retail sales of automobiles and household equipment were already slipping. One of the latter is Frank Pace, Jr., president, General Dynamics Corp., who says the lesson is: "Government and industry each must reorganize itself in a manner so as to insure that the ultimate national policies which are important to the survival of the nation can be effectively applied by the government cooperatively with industry."

# Reds Push Foreign Aid Drive

● Russia is now openly challenging the West's virtual monopoly on economic aid to underdeveloped countries with a program of her own.

● Moscow's tactics are to concentrate its efforts on a few countries where it thinks they will earn the highest political dividends.

● The Soviet block currently is doling out aid at the rate of about \$500-million yearly, but could easily triple that without any economic strain.

At a secret meeting in Bonn last weekend, 28 top U. S. and West European businessmen held a frank discussion of what is emerging as the West's No. 1 economic problem: How to bolster the free world's economic growth in the face of fast-growing Soviet competition.

The hush-hush conference was a response to the dangers of Moscow's economic penetration of the West. While Soviet trade so far has had mostly nuisance value, Moscow is openly challenging the West's virtual monopoly on economic aid to underdeveloped countries.

Late this week, the Bonn conferees—which included such Americans as David Rockefeller of Chase Manhattan Bank and Leo D. Welch of Standard Oil Co. (N. J.), along with bankers and businessmen from nine European countries—handed proposals to top officials in Washington, London, and other Western capitals. Their main conclusions:

- The U. S. should join Western Europe in arranging an effective embargo on Soviet commodity dumping. The Soviet Union already has upset aluminum and other commodity markets by small, but significant, sales to the West (BW—Apr. 5 '58, p98).

- The U. S. and West European countries should work toward using NATO's organizational framework to fight the economic cold war against the Soviet bloc. This proposal reinforces long-standing pressure, more from European than American officials, to make NATO an active economic weapon against Soviet trade penetration into any more of the world.

- **Mobilization**—Already, Washington is facing up to the new and unhappy fact that the Soviet Union is stepping up its economic aid program. Because of this campaign, the Senate at mid-week appeared ready to authorize most of the \$3.1-billion in new aid funds

requested by Pres. Eisenhower. It was also in a mood to give Eisenhower freer rein in meeting the challenge of the Soviets.

Besides that, the Administration already is blueprinting a bigger, tougher foreign economic aid program for next year.

Two other signs of Soviet aid competition—and Soviet methods—emerged this week:

- Moscow suddenly suspended \$285-million worth of credits to Yugoslavia because of Pres. Tito's independent Communist line. This clearly shows that Soviet aid does have "political strings" attached.

- The Committee for Economic Development released a comprehensive study of the Soviet aid program. It pointed out that Soviet bloc credits accounted for between 75% and 100% of all outside aid received by Afghanistan, Egypt, Indonesia, Syria, and Yemen.

## I. Russian Tactics

The Soviet economic aid offensive began just after Stalin's death. Starting slowly, it has gained momentum fast, particularly since last fall. Moscow's first move was a \$3.5-million loan to Afghanistan in January, 1954. In January, 1958, Soviet bloc aid totaled \$1.9-billion. And in the past five months there have been additional aid offers—for instance, \$30-million to Ceylon.

Under Premier Nikita Khrushchev's guiding hand, the Soviet offensive has been sharpest in the uncommitted countries of the Middle East and southeast Asia. The program has been highly successful because Moscow has tried to:

- **Concentrate on a few, selected countries.** The Soviet aid effort still is only about one-third as large as the West's. But Moscow picks targets where it stands to earn quick political dividends.

Thus, its aid has been greater than the free world's in seven key, uncommitted countries.

Provide an attractive alternative to the West's aid program. Moscow has played on the desire of many countries to feel less dependent on the West for development capital. This, in turn, has tempted countries to play off the West against the Soviet Union.

Except for Communist Chinese grants to Cambodia and Nepal, all Soviet bloc aid has taken the form of loans.

So far, Soviet military aid has added up to about \$378-million, mostly to Egypt and Syria (United Arab Republic). Indonesia also is receiving Soviet arms—no one knows just how much or on what terms.

- **Big Jobs**—By concentrating their efforts, Soviet planners have been able to finance large projects that pack a wallop in the host countries.

Take a few examples:

- **India** has received a \$132-million, 12-year credit for a steel mill as part of its second Five-Year Plan. The 1-million-ton mill at Bhilai, due to be completed next year, will boost the country's steel capacity some 60%, save India \$80-million yearly in much-needed foreign exchange. Another \$126-million Soviet credit for machinery and power plants will also have a big impact.

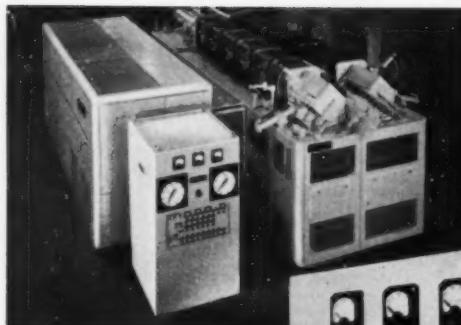
- **Egypt** has won \$175-million in Soviet credits—besides arms aid—for 65 industrial projects ranging from steel-fabricating plants to textile mills. Along with a \$56-million credit from Czechoslovakia, the loans will cover about half the estimated foreign-exchange costs of Egypt's ambitious five-year industrialization program.

- **Yemen**, strategically located on the Arabian peninsula, has received a \$25-million loan from Communist China and the Soviet Union for port and highway development. Right now, there are about 200 Soviet technicians in the tiny country—and Moscow is forcing all other foreigners to get out. In addition, Russia has sent the country 12 shiploads of arms, and now is building gun emplacements and a submarine base.

## II. Calling the Plays

It's not easy to compare Soviet aid efforts with the West's aid program. For one thing, U. S. aid, by far the biggest chunk of Western aid, takes many forms, from Export-Import Bank loans to surplus crop disposal programs. But you get some picture of the East-West aid race from the new study that CED has made.

Its main conclusion is that over the



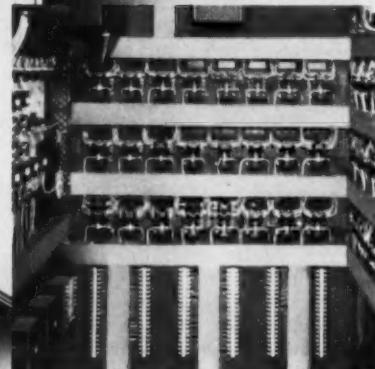
Over-all view of  
automatic induction  
billett heater for  
steel forgings.



Closeup of control  
cubical for 3000  
kw, 60 cycle, in-  
duction heater.



Special Magnether-  
mic control panel uses  
standard Allen-Bradley  
units—all listed in  
the A-B Catalog.



## MAGNETHERMIC® selects **ALLEN-BRADLEY** Quality Motor Control

The reliability of automatic production equipment is no better than that of the electrical control—which is the “heart” of the machine. Consequently, it is easy to understand why Allen-Bradley—the *quality* motor control—is usually preferred.

The simple solenoid design—around which all Allen-Bradley motor starters, contactors, and relays are built—has only ONE moving part. This assures

millions of trouble free operations. Mechanical wear is reduced to the minimum. And the double break, silver alloy contacts—standard *throughout* the Allen-Bradley line—eliminate down time for maintenance. They are always in perfect operating condition.

Make certain that your automatic production equipment is operated with Allen-Bradley *quality* motor control. It costs no more and—you cannot do better!

Allen-Bradley Co., 1332 S. Second St., Milwaukee 4, Wis.—In Canada: Allen-Bradley Canada Ltd., Galt, Ont.

Another automatic production machine “goes Allen-Bradley”

past three years the free world contributed three-quarters of the economic aid extended to underdeveloped countries in Asia, the Middle East, and Africa. However, the study goes on to point out that over half the aid went to five U.S. military allies. For instance, Cambodia, Laos, and South Vietnam together received over 40% of the outlay.

By contrast, Soviet bloc credits represent 30% of all outside aid to India and 40% each to Burma and Ceylon. Even more startling, they accounted for the largest portion of outside aid—between 75% and 100%—in such countries as Egypt and Indonesia.

• **Russian Aims**—In the aid competition, Moscow starts with some big natural advantages. Many countries fear “Western economic imperialism,” overlook or refuse to worry about the Soviet Union’s own aims of economic—and political—domination.

Beyond that, the Kremlin can call the plays just as it wants, without waiting for Congressional approval. Thus, it ships large numbers of technicians, many fluent in Asian and Middle Eastern languages, into host countries. During the last half of 1957, an estimated 2,300 Soviet bloc technicians, twice the U.S. number, were serving abroad in 19 underdeveloped countries. An almost equal number from these countries were getting training in the Soviet bloc.

To top it off, the Soviet bloc readily accepts, and often needs, raw materials and agricultural products offered as loan repayments.

• **Loan Terms**—Soviet terms to potential borrowers are attractive. The standard loan is for 12 to 15 years at 2½% interest, repayable in goods or convertible currencies. That compares with a 4½% to 5% interest rate charged by the Ex-Im Bank and the World Bank—neither of which takes goods for repayments.

Moscow usually writes in safeguards when making credits. By leaving repayment terms to later negotiation, it gets leverage for putting political pressure on host countries. On cash repayments, it also insists on convertible currencies pegged to gold.

• **Biggest Challenge**—Probably the biggest Soviet challenge to the West is the fact that the Soviet bloc clearly could double or triple its current rate of foreign aid spending—now about \$500-million yearly—without any great economic strain. The Soviet Union’s gross national product is growing at about twice the U.S. rate. Moreover, Russia’s faster rate of industrial growth, relative to growth of raw materials and farm output, would seem to make it profitable to exchange increased amounts of industrial goods for products from host countries.

# Oil Companies Lose Round I

**U.S. jury indicts Humble Oil & Refining Co. and 28 other major oil companies for conspiring to fix prices. The case dates back to the Suez Canal crisis.**

Early in 1957, when the Suez Canal was closed and U.S. oil companies were operating an emergency oil lift to Europe, Humble Oil & Refining Co.—big producing affiliate of Standard Oil Co. of New Jersey—increased the price it paid for Texas crude oil by 25¢ to 45¢ per bbl. Other companies followed suit, and later the price of gasoline at the pump went up 1¢ per gal.

Last week, a federal grand jury in Alexandria, Va., handed down a one-count indictment accusing Humble and 28 other companies of conspiring to fix prices in violation of the Sherman Act. Conviction on the charge could bring fines of \$50,000 each against most of the nation’s major oil companies.

• **Clamor**—The initial price increase on crude oil announced by Humble on Jan. 3, 1957, finally settled down to about 25¢ per bbl. But the action set off a nationwide clamor.

Consumer organizations protested, congressmen threatened, and the press castigated the oil industry. There were accusations that the companies were taking advantage of an emergency period—when demand was high and Europe was shivering—to slip through a price hike.

There were lengthy hearings in both the House and Senate, where oilmen argued that the increase was long overdue and was needed to meet rising production costs. The clamor died down and the price action was all but forgotten—except by 23 people sitting in a jury room on the third floor of Alexandria’s Post Office building.

• **Months of Testimony**—For almost 15 months, the jury, headed by an Alexandria banker, heard almost 150 oil company witnesses—from stenographers to executives—and subpoenaed for its files thousands of documents.

In the final days of the jury’s term, there were indications that the Justice Dept. did not expect an indictment to be returned. A Washington newspaper last week quoted a court spokesman as saying there would be no indictment.

In its last week, the jury summoned 28 ranking oil company officers in one day, recessed for two days, then came back to work. All day Thursday, May 29, the jurors met and Justice Dept. attorneys scurried back and forth to the jury room to write and rewrite an indictment. Although the Justice Dept. refused to comment, there was some belief that the department had a “runaway jury” on its hands.

When the indictment was returned, the Justice Dept. press office was flooded with calls for copies of the charge. An empty-handed press officer explained: “The indictment did not take the form we anticipated.”

• **The Indictment**—Whether or not the Justice Dept. wanted the criminal indictment, it now has the job of attempting to prosecute the oil companies on charges of engaging in an unlawful combination to raise and fix the prices of crude oil and automotive gasoline throughout the U.S. except in five Western states.

According to the grand jurors, the companies violated the Sherman Act’s anti-conspiracy provisions by agreeing to:

- Increase the posted crude oil prices throughout a 12-state producing area.

- Increase gasoline prices in 43 states and the District of Columbia.

The indicted companies argue that the price increases were not collusive but simply a matter of sound business economics, and predict that they will beat the Justice Dept. attorneys in what promises to be another long legal bout.

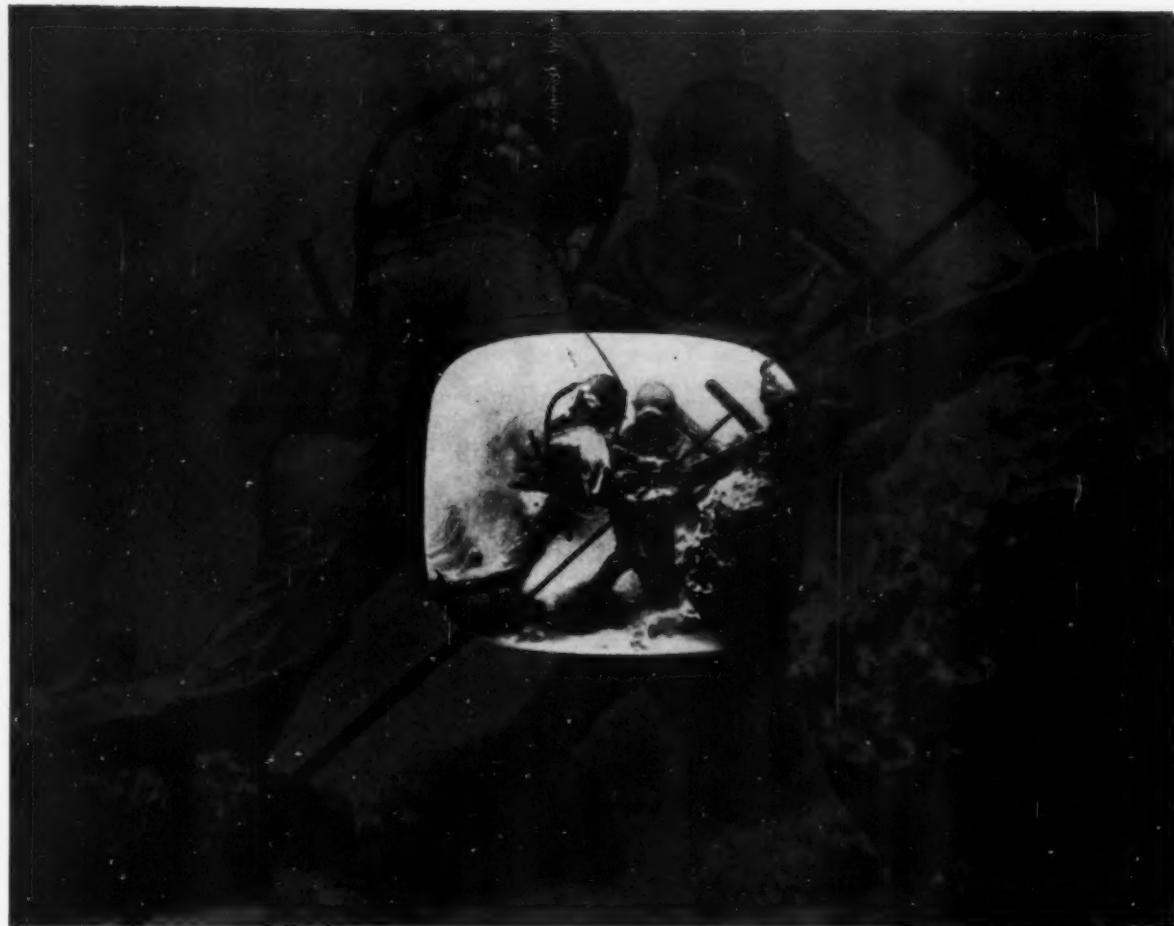
• **Offbeat System**—Unlike most other commodities, oil is priced by the purchaser—not the producer. The purchasing company, which is often itself a producer, posts the price that it is willing to pay for a barrel of crude oil, and the producer as a rule accepts it.

Follow-the-leader crude price increases have been normal for years in the oil industry and, although the Justice Dept. has long studied the practice, the Alexandria case is the first direct governmental challenge against the pricing system.

• **Next Bout**—The government anti-trusters are mapping plans to take their case to court. Their top prosecutor will be Joseph McDowell, a long-time anti-trust lawyer who guided the Alexandria investigation.

The companies will be arraigned next Monday in Alexandria before Federal District Judge Albert V. Bryan. Oil companies’ lawyers are expected to seek a change of venue, but the Justice Dept. says it will oppose any motion to move to another court.

This week, Justice Dept.’s Victor R. Hansen said that he expects the so-called oil cartel case to go to trial by early fall.



**Brighter picture, greater contrast.** Even this dimly illuminated underwater scene "gains" depth and detail when

pictured on monitor (inset) of super-sensitive new TV camera made with nickel-containing metal shield.

## How nickel sharpens the "eye" of the military's new underwater TV camera

At the bottom of the ocean, it is hard enough to see with your naked eye.

For the "eye" of a TV camera—the image orthicon—it was out of the question . . . until Admiral Corporation put its designers to work on an extra sensitive instrument for the Armed Forces.

They worked out a special system of circuits that "magnify" the light the camera receives. But stray magnetic fields set up by these circuits wandered, interfering with the camera's operation.

To overcome this interference,

Admiral's engineers built a shield of a special nickel alloy called MuMetal\* around the image orthicon. This alloy, (77% nickel), possesses high magnetic permeability. In effect, it provides a magnetic path-of-least-resistance which detours these stray fields away from vital parts of the equipment.

The result is a TV camera that can "see" as much by the flicker of a match as a man with 20/20 vision sees by the light of a 150-watt bulb!

And because the camera must be able to operate under water, it has

nickel-plated hardware to provide corrosion resistance. And nickel-containing stainless steel hardware where mechanical strength is needed.

**Do you have a metal problem?** One that involves magnetism . . . shielding . . . corrosion . . . high or low temperatures . . . fatigue or some other complicating factor? Talk it over with us. We—and nickel—may be able to offer constructive help.

\*Trademark, Allegheny Ludlum Steel Corporation

**THE INTERNATIONAL NICKEL COMPANY, INC.**  
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**INCO NICKEL**  
NICKEL ALLOYS PERFORM BETTER LONGER

# In Business

## New York Employers Wait Clarification Of Ban on Job Discrimination for Age

New York employers have an apprehensive eye cocked for July 1, effective date of the state's new law barring job discrimination on account of age against persons between 45 and 65. Meanwhile, the State Commission Against Discrimination plans mid-June hearings in an effort to evolve at least tentative rules for a law that one expert has labeled "very loosely drafted."

SCAD Commissioner Charles Abrams says that among the points not cleared up in the law are:

- The extent to which age is a legitimate factor in hiring, as in very heavy work.
- The question of age in relation to pension plans.
- Legitimate phrasing of help wanted ads and application forms.

Abrams says the commission "does not intend to harass employers" by over-strict enforcement; conciliation and persuasion will be "particularly emphasized."

## One Out of Every 10 Intercity Buses Has Defective Brakes, ICC Survey Finds

Out of every 10 intercity buses that whiz by you on a thruway, the chances are that at least one has a faulty brake system. That's the finding of a check in April as part of the Interstate Commerce Commission's safety crackdown.

ICC took a look at 6,266 buses, at spots all over the nation; 11.7% of them had defective brake systems, and 193 were found to be definitely unsafe. All in all, ICC found 10,515 violations of its safety rules, most of them minor. Among the more serious defects were "dangerously loose steering mechanism, broken springs, fuel leaks, faulty tires, and axle defects."

## Soap Making Antitrust Suit Reinstated as Court Upholds Secrecy of Grand Jury Minutes

The Supreme Court this week ordered the reinstatement of a 1952 monopoly suit against the big three soap makers—Procter & Gamble, Lever Bros., and Colgate-Palmolive—along with the Assn. of American Soap & Glycerine Producers. The 6-3 ruling means the Justice Dept. can now bring the suit to trial.

The case arose from an investigation of criminal charges against the soapmakers, in which the grand jury failed to indict. The Justice Dept. then brought a civil suit; but this was dismissed by the trial judge in 1956,

when the government refused to allow the companies to inspect the grand jury minutes.

This week's decision has general application in antitrust litigation, since the Supreme Court asserts the right of the Justice Dept. to use evidence garnered in a criminal investigation in a civil suit, without having to violate the secrecy of grand jury proceedings. In the majority opinion, Justice William O. Douglas held that the secrecy need not be broken "except where there is a compelling necessity," which the court did not find in the soap case.

## Martin Revson Quits Post at Revlon, Company Headed by His Brother Charles

Charles Revson, president of Revlon, Inc., and his brother Martin, executive vice-president and director, parted company this week. Following some weeks of rumors of a break, Martin resigned; the brief announcement cited only "personal differences."

The trade reports that Charles Abrams, advertising vice-president, will succeed Martin Revson, but the company emphatically denies a decision has been made.

Charles Revson, known as a driving executive (BW—Aug. 12 '50, p70), has promoted and advertised his company into a top place among cosmetic companies, with 1957 sales of \$95.7-million. The advertising budget, an estimated \$18-million, was proportionately very heavy.

Ad agencies rate Charles Revson as a tough man to please; he has switched the Revlon account several times in the past three years. One agency president who lost the account, explained it this way: "It was a matter of who would run the agency, me or Charles Revson."

## Business Briefs

The American Express Co., which sells more than \$1-billion in traveler's checks every year, may be going into the credit card business, the trade hears. But the company will say only that it is not going to acquire Diners' Club, Inc., a top credit outfit.

Befuddled buyers of car and truck tires this week got a Federal Trade Commission chart to guide them through the chaos of terms that have fogged up tire and tube advertising. At the urging of the National Tire Dealers Assn., FTC issued a guide that lists—and bans—a swarm of the gimmicks used most often to delude the customer. After Aug. 27, FTC will take legal action against violators.

The Administration will try to tighten further its program for setting voluntary limits on oil imports. Pres. Eisenhower this week ordered "unfinished gasoline" and other "unfinished oils" products brought under the quota system. Only crude oil has been covered up to this time. Though the new products that will be put under quota do not loom large in total imports, the Administration saw them as a possible "circumvention" of the program.

A MASS MARKET  
OF VAST POTENTIAL



THE RICH RUHR MARKET IS  
ONLY ONE DAY AWAY VIA  
KLM AIR CARGO



Actually less than one day from New York is a market larger in population than Cleveland and Pittsburgh combined. Here in West Germany's "Golden Triangle," that includes Dusseldorf and Cologne in the rich Ruhr Basin, and Frankfort — only 20 air-minutes to the southeast — lies a growing, receptive and profitable business potential.

With KLM Air Cargo, this market becomes as accessible, too, as Pittsburgh and Cleveland. Daily cargo service...one-carrier

handling, and the special know-how of KLM expediting personnel make this possible. An informative booklet, "Winged Profits," that tells exactly how KLM Air Cargo cuts delivery time, freight and storage costs, is available on request. Case histories are cited. Write: KLM Royal Dutch Airlines, Freight Dept., FBW-67, 430 Park Avenue, New York, N.Y. For specific rates on your own commodity, contact your Cargo Agent, Forwarder, or KLM office.

Serving the Automotive Industry



## EAGLE-PICHER / Manufacturer's Manufacturer



*Richard Black*

In the automotive field we're regarded as unusually adept at manufacturing many molded and extruded parts that go into today's cars. That's one of our specialties as a "manufacturer's manufacturer."

In particular, Eagle-Picher's Ohio Rubber and Fabricon Products Divisions produce many millions of plastic and rubber automotive component parts every year. These include motor mounts, weather-stripping, seals, housings, floor mats, door trim panels and many other essen-

tials. Eagle-Picher is geared to automobile production and is uniquely equipped to keep pace with the assembly lines of this giant industry.

As a "manufacturer's manufacturer," Eagle-Picher serves such industries as paint, food packaging, ceramics, steel, appliances, electronics, petroleum, agriculture and others. Over many years we have proved that our experience in manufacturing and research successfully supplements that of our customers.

SINCE 1843 THE EAGLE-PICHER COMPANY, GENERAL OFFICES: CINCINNATI 1, OHIO



# WASHINGTON OUTLOOK

WASHINGTON  
BUREAU  
JUNE 7, 1958



Watch the coming Senate moves to rewrite the House tax bill—the bill extending the 52% corporate rate and the Korean excises for a year.

But don't be misled by the political maneuvering. Odds still are against any major tax relief in the bill that will be sent to the White House late in the month for Pres. Eisenhower's signature.

**General tax cut will win some Democratic support.** This proposal probably will take the form of higher personal exemptions and a rate cut in the lower brackets. It has little or no chance of being approved. Too many conservative Democrats will join the Republicans in opposing it. But it will give senators facing election contests a chance to go on record.

Some excise relief may be O.K.'d in the Senate. The House probably would accept this, provided the revenue loss is limited.

**Best bets are rates on autos and transportation.** The House Ways & Means Committee leaned strongly toward these, but decided against anything that might open up its extension bill to relief measures. There's strong sentiment to drop the manufacturers' tax on autos from 10% to 7%, kill the 3% tax on freight and lower the passenger rate from 10% to 7%.

**Higher tax on bank profits from government bonds** is being talked in some Congressional circles. Idea is to treat such profits as regular income, subject to the 52% corporate rate. As the law now stands, the banks pay a much more favorable rate on such capital gains, just as individuals do. The Treasury is opposed. Its reason is that a switch in tax treatment on bank profits would weaken bond buying in periods when Treasury securities are depressed. Best judgment is that the law will stay as is.

— • —  
**Advice Eisenhower gets on the outlook still is divided.** The decision against a general tax cut at this time did not have unanimous support from the men who counsel the President on economic policy. This has become pretty well established in the week since the decision was made. But the dissenters are keeping quiet, publicly.

On the more optimistic side are Hauge and Anderson—the President's Assistant for Economic Affairs and his Treasury Secretary. Anderson took the lead in opposing a tax cut. Both Anderson and Hauge foresee an upturn in the fall.

Less optimistic are Saulnier and Martin. Saulnier, chairman of the President's Council of Economic Advisers, has reservations about a fall pickup. He would like to have seen a tax cut, as a stimulant. Martin, chairman of the Federal Reserve Board, opposed a tax cut, but isn't convinced that the next few months will see a rise set in. On taxes, he simply didn't feel that a cut would do much, if any, good.

— • —  
**What's behind the Washington optimism?** It's partly "feel," a conviction that the bottom either has been reached or is near and that an upturn will follow. But many statistics are hauled out to support the "feel."

Here are the facts most referred to: Employment is rising and you are seeing a decline in unemployment (it may turn up again this month, as students come into the labor market). Hours worked and overtime, both considered sensitive "lead" indicators, rose in May for the first time this year.

# WASHINGTON OUTLOOK (Continued)

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WASHINGTON  
BUREAU  
JUNE 7, 1958

The April rise in retail trade carried over in May. At the wholesale level, durable goods moved faster than nondurables in April. Steel production is rising. Gasoline sales scored a gain in May. New orders booked rose in May. Farm prices are good—best since Korea.

**The official conclusion is that the worst is over.** But no one predicts any sharp, spectacular rise. The White House line is that the trend from now on will be slowly up, with next midyear as about the time when the recovery will be pretty well complete—with the economy back to where it was in 1957.

**You should watch Washington spending plans closely.** The prospect has been that spending in the fiscal year starting July 1 would hit \$78-billion—a sharp rise. But Budget Director Stans wants to hold it below that figure—to keep the deficit down. In September, Washington will be making up its mind on spending for fiscal 1960—the year starting July 1, 1959. If the White House takes a tough attitude on budgeting at that time, it will be a pretty good bet that federal outlays will be something less than the economic prop now being forecast. Pessimists see this as a probability.

— • —

**Here is the other side of the coin**—a minority view, certainly a minority view in terms of influence at the White House:

**Plant and equipment expenditures by business** are still trending down.

**Autos show no promise of a rise of consequence.** Model changes will bring an increase in sales, but this will be less than usual.

**The rise in steel** results in part from inventory building—stocks have been allowed to run down—and buying in expectation that the steel industry will raise prices in response to an automatic wage rise.

**The rise in government spending is slower than expected.** It's on a climb, but the real impact will be delayed.

— • —

**The truth as to what will happen is probably in between**—a slow recovery, taking months for the economy to return to high ground.

**The White House seems willing to risk this.** Eisenhower has already made it more than clear that easier credit and higher spending is as far as he is willing to go at this time. Eisenhower assistants are reconciled to the prospects that the Democrats will score House and Senate gains this fall. Primary results to date give the GOP little comfort.

— • —

**California is a GOP setback**, despite all the explanations.

**Knowland** fell far short of expectations. As Senate Minority Leader, he ranked third in the GOP national lineup—only Eisenhower and Nixon ahead. The vote piled up by the Democratic opposition puts a major question mark over the GOP's ability to hold the governorship.

**Knight**, the GOP governor running for Knowland's Senate seat, won his party's primary. But the vote was badly split, which gives Democratic contender Engle a good chance in November.

**Vice-Pres. Nixon is hurt.** He was committed on Knowland. Question is whether Eisenhower and Nixon can keep California Republican in November. If they can't you will see a real challenge to Nixon for the Presidency in 1960.

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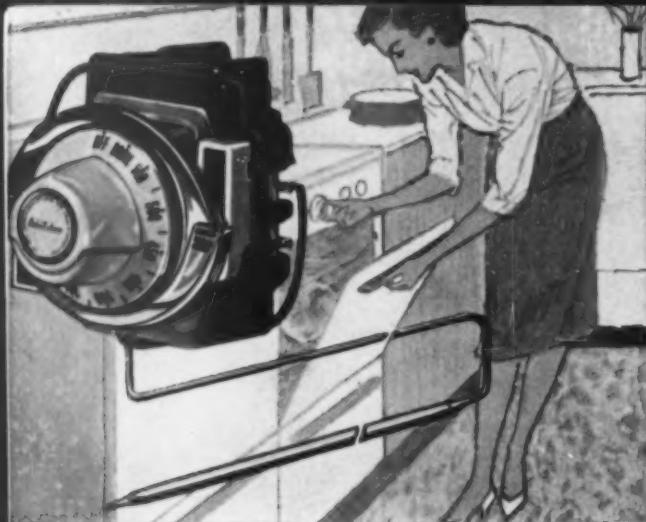
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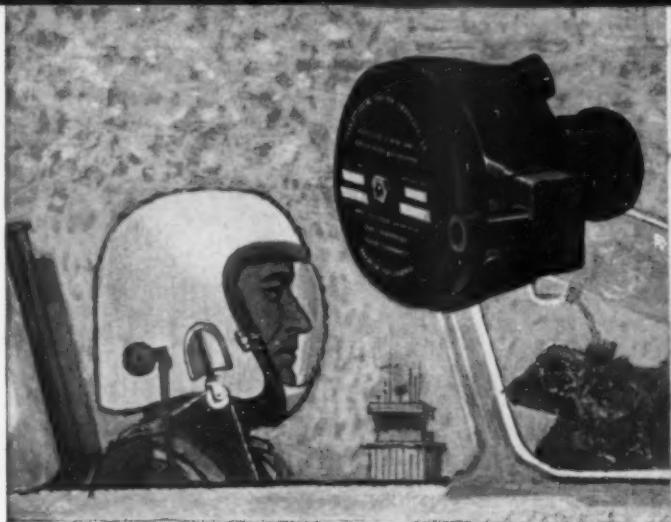
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# VISIONEERING

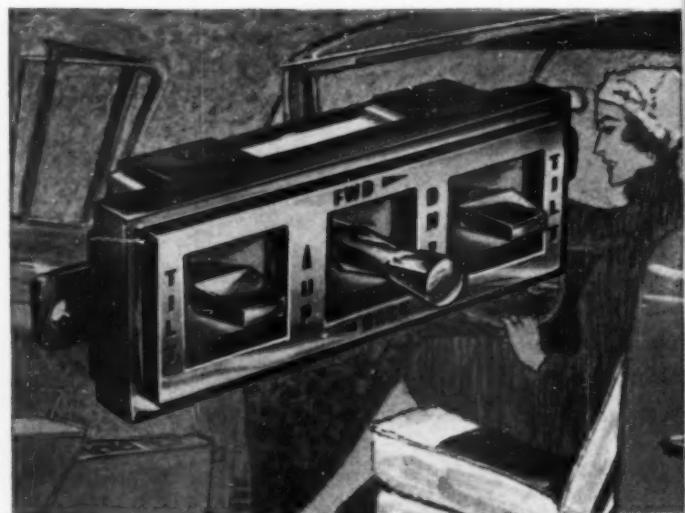
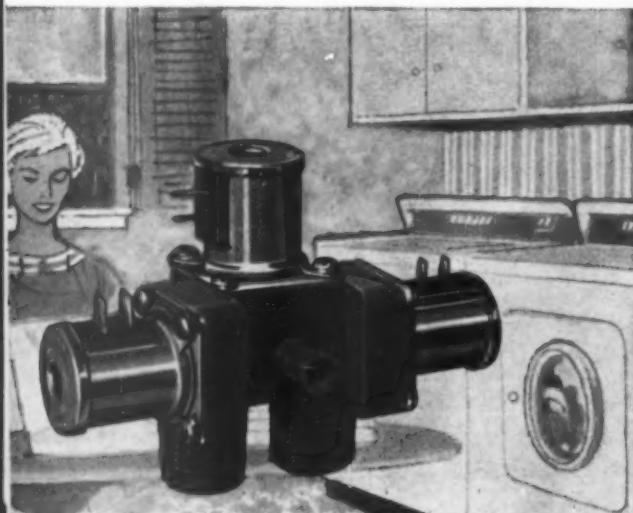
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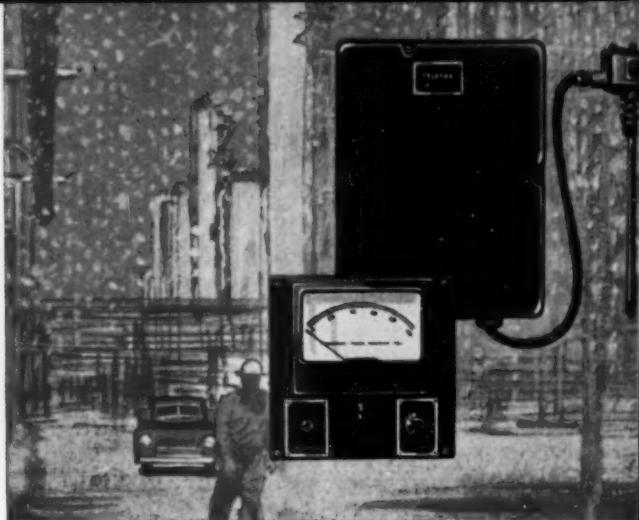
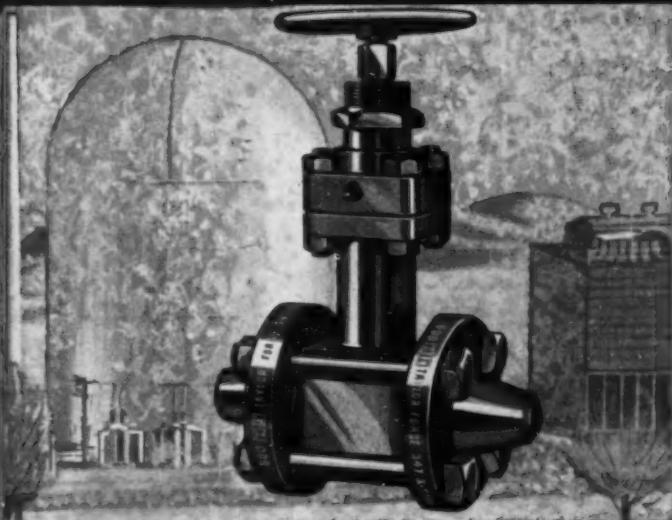
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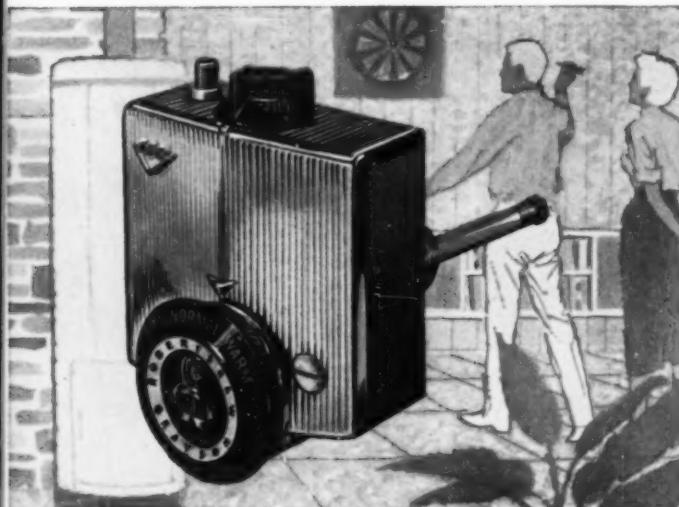
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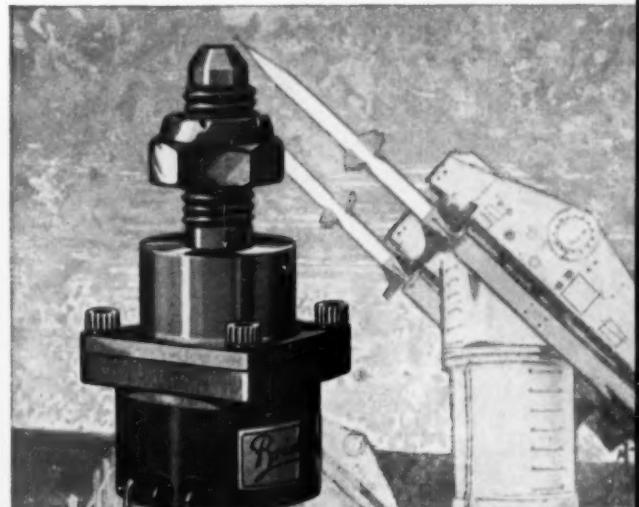
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*painting by John Falter*

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## PRODUCTION

# What AEC Got for \$120-Million

- AEC has made a big investment in experimental atomic power plants. What is there to show for it?
- Critics say cheaper atom power might be here sooner if AEC didn't try out different reactor types first.
- But the experimental program has produced a wealth of information to facilitate building full-scale plants later.

Four years ago, the Atomic Energy Commission launched its five-year program of building experimental atomic power plants with some financial help from private enterprises.

Four of the five plants conceived at that time have since been completed, as has another that was included subsequently. From these projects has come much of the extensive technology now available to the civilian atomic power program. Yet, almost from its inception, the five-year plan has been the target of steadily mounting criticism.

That's partly because it tied U.S. atomic power development to a highly controversial concept—checking out different reactor types with small, relatively inexpensive plants before proceeding with construction of the vastly more costly full-scale projects. Only one of the plants involved—Shippingport—is of full-scale size. The others are quite small in terms of power production.

The experimental plants have already pulled some answers down from the blue skies of pure research. The five reactor types all proved feasible; new and cheaper fuel forms evolved; safety procedures have been worked out; and other hints toward making atomic power competitive in cost with electricity generated by fossil fuel have emerged.

• **Adverse Talk**—But criticism leveled at this method of developing reactors is that it is too slow, that we can achieve economic atomic power more quickly by building full-scale plants. There is a strong move in Congress now to force the government to build several large plants.

Another criticism of the experimental plants is that they have taken longer than scheduled to build—one plant by as much as two years—and cost more than estimated. Four of the plants wound up costing a total of \$89.6-million, as against original estimates totaling \$58.4-million. Costs of the first five plants planned will run at least \$118.7-million, almost \$45-million above the original estimates. The sixth plant, a

small one that does not include an electric generator and for which no estimates were announced, cost \$2.6-million.

Some criticism of the boosts in costs is unrealistic. Since these were the first plants of their type, there was no solid technical data on which to base estimates. The estimates were largely educated guesses, which turned out to be overoptimistic.

### I. Lessons for the Future

At any rate, this is the \$120-million question: What did the scientists and engineers get out of these six projects?

Without doubt, the most important product of these plants has been information. Except at Shippingport, Pa., where a full-scale plant is being operated by Duquesne Light Co. with a Westinghouse-built reactor owned by AEC, none of the plants is designed to turn out substantial amounts of electric power. And even at Shippingport, testing takes priority over power production.

• **Basic Questions**—None of the experimental plants is expected to produce power as cheaply as it can be done with conventional fuels. They are designed, rather, to provide information pointing out the path to cheap atomic power. Since they are pioneer plants, most of the questions they answer are extremely basic: Will a certain type of reactor work? Can it be made to work safely? Can it then be controlled closely enough to be useful as a source of power?

• **Many Varieties**—Reactor types vary as to fuels, coolants, moderators, and structural materials. For example, uranium fuel comes in metallic or metal alloy form, plus several organic and inorganic compounds that range from liquids to hard ceramic pellets. Moderators—substances that control the speed of neutrons in the fission process—range from solids such as graphite to common liquids such as plain water. For structural materials, there's a long list of corrosion-resistant materials

from solid gold (BW-Jul.21'56,p94) and other exotics like beryllium and zirconium to plain old carbon steel. By combining different combinations of these elements, you can come up with an enormous list of possible reactor types.

"Somebody once said there are 2,400 possible types," explains Dr. Norman Hilberry, director of the Argonne National Laboratory, AEC's major power reactor development center. "Of course, some of these would be sheer nonsense as power reactors. You could not say which would make the best power reactor without actually building and operating some of them."

"That is the purpose of the experimental reactor program—to sift through the variables and start development of some of the most promising types. No businessman in his right mind will commit his company to build a lot of nuclear power plants until they can come a lot closer to competing with plants using fossil fuels. But, since it is obvious that we eventually need this source of power, it is imperative that we try to find the optimal approaches to economical nuclear power."

• **Basic Answers**—The most important answer produced by the experimental plants, of course, is that the five types of reactors are feasible from the engineering standpoint, even if they are not yet economic. By proving that it could produce three times the amount of heat that it was designed for, one of the reactors showed that cheap atomic power, though still not achieved, may be closer than had been expected.

Progress also has been made in improving and cutting the cost of nuclear fuel, a major item of expense. Davis credits the experimental reactor program with developing uranium oxide fuel. The oxide stands up to radiation damage better than the metallic fuels previously used in many reactor types. That means it can stay inside the reactor longer and cut down on costly refueling.

The experimental reactors also have given strong hints that costly, in-plant safety devices and techniques—heavy shielding, radiation monitoring, materials handling—can be scaled down without danger to the operating crews or the surrounding countryside.

A nontechnical conclusion also is of major significance to the electrical power industry. Three of the experimental reactors are built, or building, on isolated government-owned sites. But two of the others are much closer to population centers in the Pittsburgh and



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Chicago areas. In neither case were intensive publicity campaigns required to convince residents of neighboring areas of the safety of the plants.

## II. Lessons in Detail

To go beyond such generalized information, you have to look at each of the experimental plants.

Most interesting of the experimental plants, because of its size, is that at Shippingport, which is jointly owned by AEC and the Duquesne Light Co. It is this country's first, perhaps the world's first, full-scale atomic plant built solely to produce power. (Britain's Calder Hall plant was designed for power and plutonium production. There is no information on what Russia may have done.)

• **Inner Workings**—The heart of this plant is a reactor cooled by water under pressure. The pressurized water gives up its heat to another water loop in a steam generator. The steam drives a more or less conventional turbine.

Economic production of power was never a primary consideration in the building of Shippingport. Safety and reliability were. Where ordinary carbon steel might have done the job, stainless was chosen just to be sure. The desire to test all major elements of the plant also was a major concern. Compactness of equipment, which would have made for economy, was sacrificed in favor of accessibility. So the estimated cost of power, nearly 65 mills per kwh.—compared to an average 5 to 9 mills for the modern conventional plant—was scarcely a shocker.

• **Full Speed**—The Shippingport plant went into operation last December. Though still going through initial operating tests, it has operated at full design power, 60,000 kw. Periodic tests prescribed by AEC will continue throughout the lifetime of the plant.

"We haven't had the plant in operation long enough to come to very many definite conclusions," says Walter J. Lyman, operations vice-president for Duquesne Light. "So far, it has been as reliable as any other plant we have. And it has been more responsive to load changes. We increase or decrease load on our conventional plants at an average rate of a megawatt per minute. We have changed load at Shippingport at three megawatts per second."

• **Shippingport's Goals**—Lyman lists five major objectives of the plant:

Establishing life of the core, the nuclear-fuel-bearing heart of the reactor. The question of economics of such a plant cannot be approached until it is known how often it must be refueled.

To fix the integrity of the core. It is too early to be sure of the answer on this too, but there has been no failure

in the fuel yet. The real test will come only after it has been exposed to intensive radiation for a longer period.

**To see if the plant is safe.** This has been pretty well established, since there have been no radiation problems so far, and there is no reason why the plant should become more hazardous.

**To learn how difficult the plant is to operate.** So far, Lyman reports, it "has been no more complicated than operating a conventional plant." Maintenance, little of which has been required yet, may be something else again "because we will be dealing with new, untried equipment and processes." But maintenance may be needed less frequently than at conventional plants.

**To set manpower requirements.** More operating people were required at the start of operations, but Lyman expects the eventual staff to be about the same as for conventional equipment. Also, Duquesne is setting up a training organization to teach operating procedure to employees of utilities and manufacturers and trainees selected by AEC.

**Pioneer Experiment**—The first experimental plant to go into operation—in December, 1956—was the Argonne National Lab's experimental boiling water reactor (EBWR). The lab's staff is beyond the stage of preliminary testing and now in the process of pushing this plant to its outermost capabilities. The results have been more than mildly interesting.

The EBWR, so called because it delivers steam directly from the reactor to a turbine instead of to a steam generator, was designed to produce 20,000 kw. of heat to run a 5,000-kw. turbine-generator. Last December it more than doubled its heat production (BW-Jan. 4'58, p32). In March it achieved a heat level of more than 60,000 kw.

Because of the limited capacity of the turbine-generator, the additional steam could not be used for power generation. But the savings possible with additional generating capacity could be estimated.

**A Way to Save**—The cost of generating 5,000 kw. of electric power with EBWR is estimated at 52 mills. Tripling the heat output and using it for power generation would cut the cost to 28 mills, estimates Bernard I. Spinrad, head of Argonne's Reactor Engineering Div.

You could get further reductions by increasing the heat output even more or by hooking up several reactors of the same size and type. But still these reductions only cut capital costs. The present fuel loading of EBWR fixes fuel cost at 22 mills. Spinrad believes 10 mills of this charge could be lopped off by a new, improved fuel package. Still, total power cost would run close to 20 mills—far out of the ball park.

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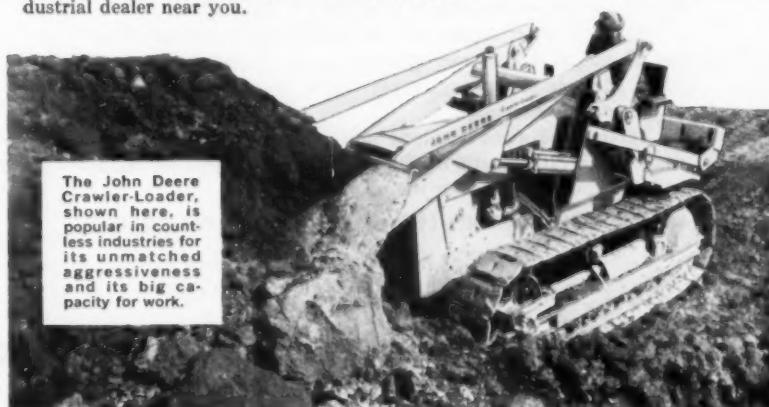
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fuel and larger boiling water reactors. Both AEC and private industry are seeking better fuels and building larger reactors of this type.

• **Fuel Producer**—Another reactor type being developed by Argonne is a "breeder" reactor, designed to produce more fuel than it consumes. It will do this by simultaneously "burning" fissionable uranium 235 and converting uranium 238 to fissionable plutonium as a valuable byproduct that could be sold. This should reduce the cost of producing power.

This "have your cake and eat it too" project is scheduled to be completed in 1960. It, too, will be small, with a power capacity of 20,000 kw.

Two other types have been built for AEC by the Atomics International Div. of North American Aviation, Inc. Both were completed so recently that they are just finishing up preliminary tests.

The sodium reactor experiment (SRE), cooled by liquid sodium, was completed in April, 1957. Atomics International has had some difficulty with radiation damage to fuel, but oxides look like the answer to this. The advantage of SRE, of course, is that molten sodium can deliver an extremely hot charge to a heat exchanger.

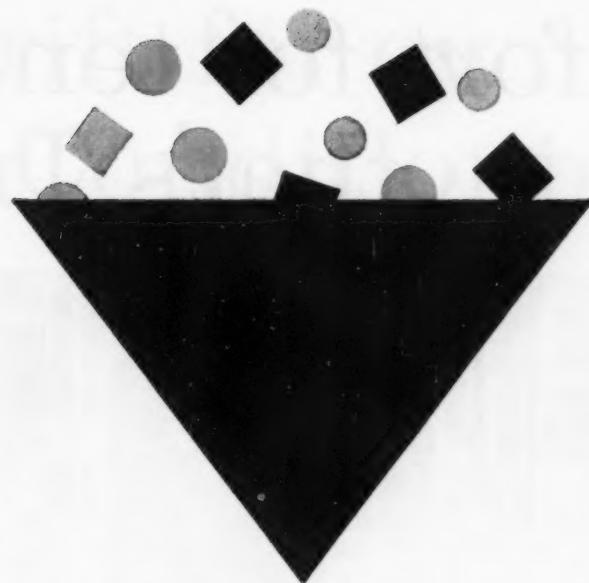
AI's organic moderated reactor experiment (OMRE) was completed last September. It employs an organic compound both as moderator—to slow down neutrons and give them a better chance to fission atoms—and as a coolant.

As with most of the other experimental reactors, tests with OMRE have been centered on finding the best possible fuel. The organic fluid employed is not corrosive, so it can be contained in less exotic metals than some other coolants. Again it absorbs little radiation and is safer than some other coolants. The big problem is whether the intense radiation inside the reactor will deteriorate the compound. That is another question that will take time to answer conclusively.

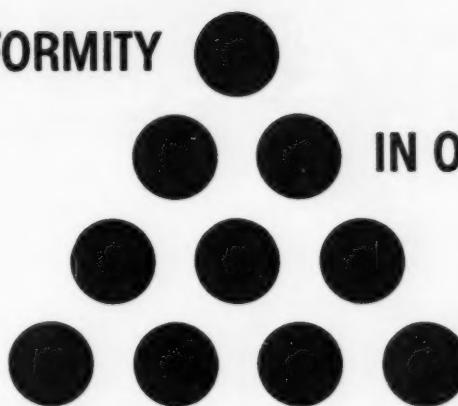
• **No Luck So Far**—AEC's Oak Ridge National Laboratory completed its homogeneous reactor experiment (HRE) last December after fussing for weeks with failures in secondary equipment. In April the plant was shut down because of leakage in the core itself.

The theory behind HRE is excellent. The fuel and moderator are mixed in liquid form and used also as coolant. A chemical processing plant siphons off some of the mixture—uranyl sulfate in heavy water—and removes the impurities that are constantly forming. The purified fluid then returns to the reactor-heat exchanger loop.

Says Kenneth Davis: All the troubles experienced with HRE appear to be correctible. In spite of them, it has proved the concept and operated at predicted stability. **END**



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FR-S 123—a major Firestone research development—can save you time, trouble and money. It ends costly die changes, reduces rejects and increases your plasticity control! A Firestone Technical-Service man stands ready to help you apply FR-S 123. Write, phone or wire today. FIRESTONE SYNTHETIC RUBBER and Latex Division.



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# Comfort for tenants that's Trane



This Fan-coil UniTrane unit heats, cools, dehumidifies . . . gives each occupant the climate he wants at a finger-tip touch. Induction type UniTrane systems are also available.

**Trane changes climates to order** in buses and trains, ships and planes; heats and cools factories and schools, hotels and homes. For human comfort or industrial processing—for any air condition, turn to TRANE.

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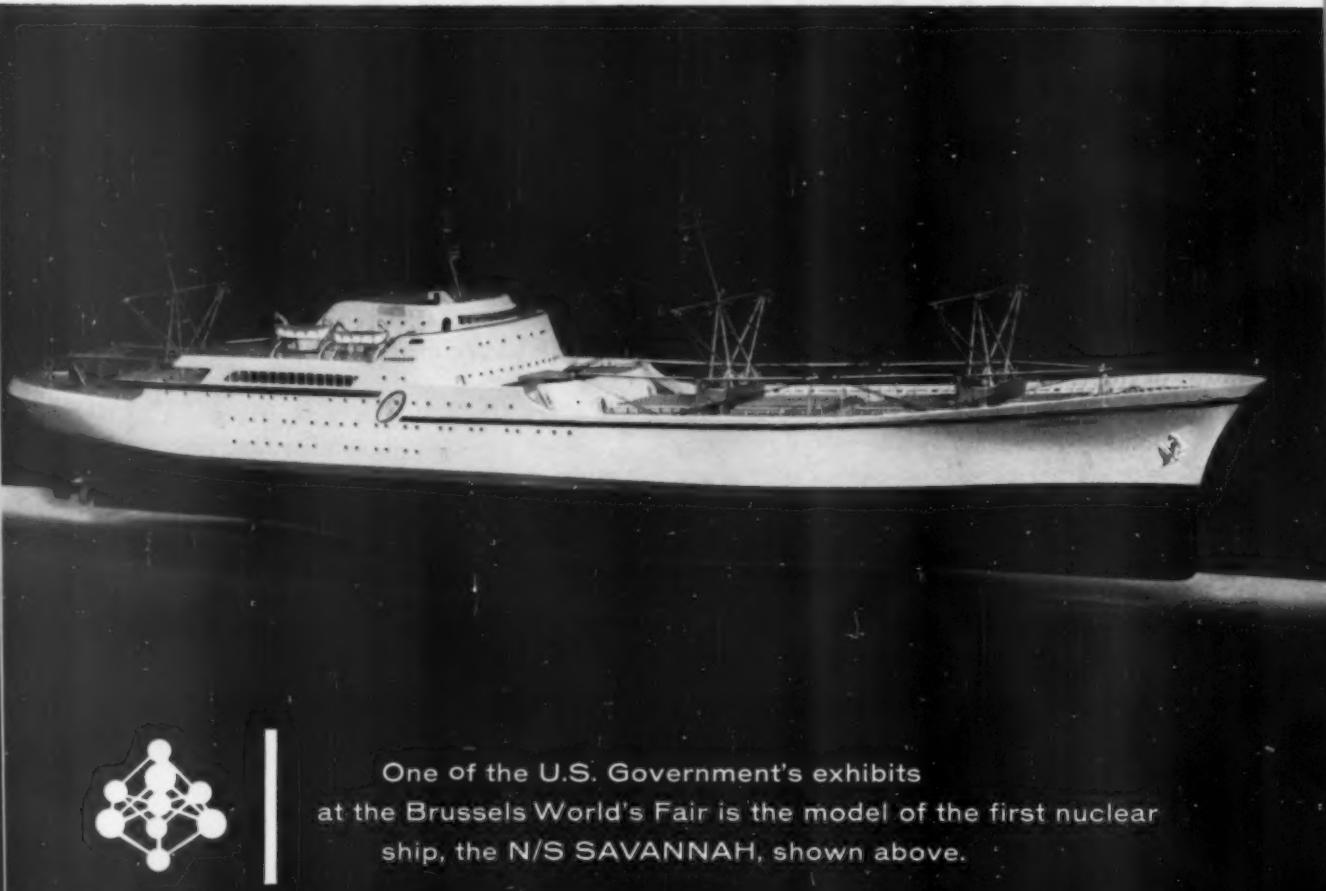
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# Creative Engineering by DE LAVAL



One of the U.S. Government's exhibits at the Brussels World's Fair is the model of the first nuclear ship, the N/S SAVANNAH, shown above.

The De Laval Steam Turbine Company is proud to play an important part in the design and construction of this 22,000 shaft horsepower vessel, the keel of which was laid on May 22, 1958, Maritime Day, at the New York Shipbuilding Corp. in Camden, New Jersey.

Under the joint sponsorship of the Atomic Energy Commission and the U. S. Maritime Administration, major contributions to the design and construction of the vessel and its machinery are being made by:

- *George G. Sharp, Inc., naval architects, designers of the vessel*
- *Babcock & Wilcox Company, designers and build-*

*ers of the pressurized water reactor and its accessories*

- *New York Shipbuilding Corp., Camden, N. J., builders of the vessel*
- *De Laval Steam Turbine Company, designers and builders of the main propulsion machinery, other engine room auxiliaries; coordinators of all engine room equipment.*

We are particularly happy to serve in connection with this project of international importance. De Laval has often performed other important services as complete engineering coordinators, and is fully prepared to undertake similar assignments.



**DE LAVAL**

**Steam Turbine Company**

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*More Ways*

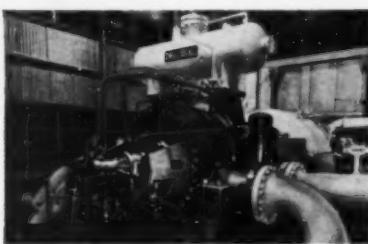
## DE LAVAL

### Creative Engineering Serves Industry



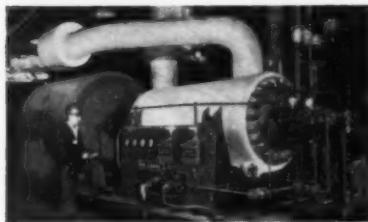
**Centrifugal Compressors for Refineries**

Shown here is a De Laval 10,200 H.P. turbine-driven main air blower handling 83,000 cubic feet per minute at the Ashland Oil & Refining Co., Ashland, Ky.



**Extra Flexibility for Gas Pipelines**

*Creative engineering* developed new De Laval Series-Parallel centrifugal compressors to meet booster stations' demand for exceptional flexibility.



**Rugged Feed Pumps for Public Utilities**

De Laval couples *creative engineering* and precision manufacturing methods to produce multi-stage centrifugal pumps for boiler feed service—built to handle pressures up to 5,500 pounds. This is an 11-stage unit in the Astoria Station of Con Edison.

Investigate the advantages of De Laval's *creative engineering* in refinery and pipeline compressors, steel mill blowers, ship propulsion units and marine auxiliaries, turbine generators, IMO pumps, worm gearing, planetary gearing and diesel engine turbocomchargers.

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**De Laval Steam Turbine Company**  
895 Nottingham Way, Trenton 2, New Jersey

## In Production

• • •

### Mightiest Electric Transmission Line Yet To Carry Enough Power for a Metropolis

The voltage goes up, up, up as electric utilities turn to increasingly higher voltage lines providing more power with smaller conductors. General Electric Co. this week announced plans for a transmission system to carry electric power at voltages higher than ever before. It will build a 4.5-mile prototype line capable of handling 750 kv., or 750,000 volts, near Pittsfield, Mass.—all the power needed by a city the size of Cleveland.

The project is intended to solve in advance many of the problems of carrying higher voltages. The highest now in use in this country is 345 kv. The next step will be to 460-kv. transmission in a few years, say GE officials. Some European systems now go up to 420 kv. Short experimental lines have been built up to 500 kv. in the U.S. and 650 kv. in Russia.

Construction of GE's 750-kv. line will begin next spring. It will start operation early in 1960, using voltages from 460 to 500 kv. and go into continuous operation on the 600- to 750-kv. level in 1962. It will parallel an existing 115-kv. line of Western Massachusetts Electric Co., which will run the high-voltage system.

The project will cost more than \$5-million in funds, equipment, and engineering talent from 15 GE departments and four cooperating companies. Besides Western Massachusetts Electric, these include Aluminum Co. of America, Stone & Webster Engineering Corp., and a supplier of steel towers.

• • •

### Movie Camera and Tape Recorder Gang Up To Bring Order Out of a Chaos of Data

The principles of the movie camera and the tape recorder have been combined by Berndt-Bach, Inc., of Los Angeles, in an attack on those problems of research and production that require the swift combining of varied information in a single coherent picture.

The machine—a visual-audio-electronic recorder called Datasync—is being used by Convair in work on a bomber of advanced design, where it simultaneously photographs a master oscilloscope, collects data from a score of instruments, and records the comments of technicians.

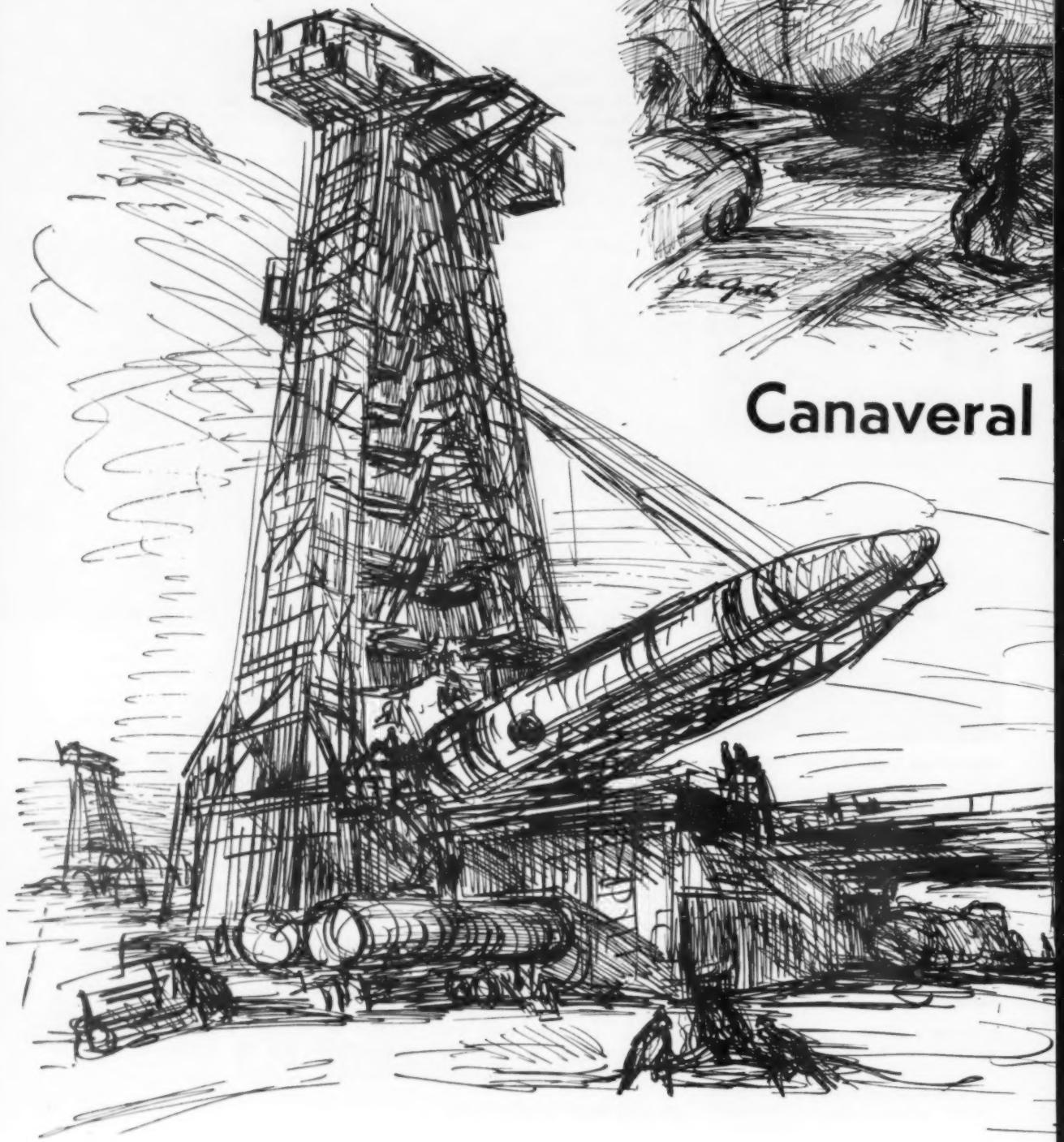
All at one time, Datasync can film an operation and record information on as many as 10 tracks on the side of the film. Within 10 minutes, the film can be developed and played on a projector whose special reproducer heads read the magnetic tracks. So you get the visual image, the recorded voices, and a record of the readings of meters, gauges, and graphs.

Berndt-Bach believes Datasync's applications will reach beyond aviation and rocketry into the fields of basic research, surgery, and factory production.

Berndt-Bach has also endowed the Datasync with the ability to give commands—such as shutting down an operation if the data feeding into it signal trouble. This feature would be important in an automated process in a factory.

Datasync costs from \$15,000 to \$53,000, depending on the complexity of the camera equipment and the number of magnetic tracks.

RESEARCH



**Canaveral**



1 Truck brings an *Atlas ICBM*, shrouded for secrecy. All other missiles come in by air.



2 Liquid oxygen fuel destined for a rocket engine is loaded for trip to launching pad.

## Booms as U.S. Waypoint to Space

On an isolated Florida beach, where the Air Force readies rockets for flight to the moon or an enemy's shores, a new, decentralized approach to weapons development is in use.

(Story continues on page 57)

4 Crews give final check to an Army Jupiter before it blasts off.

3 Gantry crane hoists an *Atlas* into position for checkout and firing.





HEATS IN WINTER



COOLS IN SUMMER

## **YORK DOES MORE WITH HEAT PUMPS**

**... even in sub-freezing weather!**

The great physicist Lord Kelvin discovered it . . . but it remained for York to make its application widely practical. Compress a gas and you produce heat . . . permit compressed gas to expand and you absorb heat. Thus it is that a York heat pump under direction of a thermostat can either warm an area or cool it.

York, with its great thermodynamics laboratories and engineering facilities, has done unique things with heat pumps. Today many large office buildings, department stores and industrial plants . . . even in the coldest

climates . . . are cooled and heated by York air-source heat pumps, without use of supplementary heating equipment. York research has expanded the perimeter of heat pump usage by finding means for greater heat recovery with reduction in operating costs—and welcomes inquiry from consulting engineers and architects.

For information about heat pumps or air conditioning for any residential or commercial requirement—get in touch with your nearest York office.



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*The minute a rocket is fired, Canaveral's Central Control begins watching its progress along a 5,000-mile flight path stretching down to Ascension Island in the South Atlantic.*

## Canaveral Booms

(Story starts on page 54)

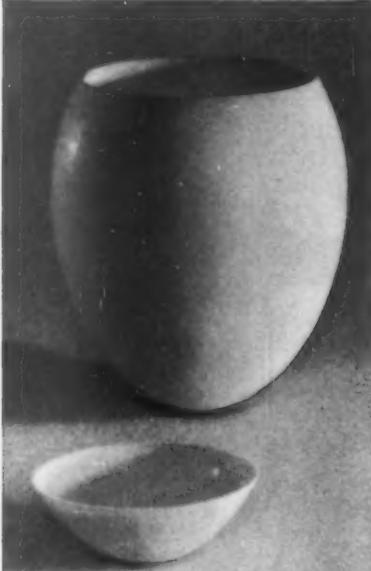
**T**HREE IS NO place on earth quite like the Air Force Missile Test Center at Cape Canaveral, Fla., as it is now. And there probably never will be again.

On a spit of hot, sandy land, isolated from the Florida mainland by the Banana and Indian Rivers, a whole new world is being born. It is a world created by the military for the prime purpose of testing man's latest instrument of war—the long-range, intercontinental ballistic missile (cover and drawings). This purpose is grim enough, but Canaveral's future is awesome. For from Canaveral, the U.S. will take its first step into space with manned rockets. From the same spot where just a few years ago alligators and deadly snakes were the most obvious signs of life, tomorrow's space traveler will be blasted out of the earth's atmosphere.

Contrasts of that sort are routine at Canaveral—a place so close to primitive nature that before a plane can touch down on its unlighted, 10,000-ft. runway, the way must be cleared of ar-



*Telemetering equipment tracks a missile's course. Planes and ships help, too.*



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of Hard, Brittle Material...  
the *Silwhite* Industrial  
Airbrasive Unit**

We're not recommending our Airbrasive Unit as the best way to open your breakfast egg . . . but this photograph dramatically illustrates the delicate, precise industrial cutting you can do with it. Developed from the Air-Dent equipment made by S. S. WHITE for the dental profession, the Airbrasive Unit gas-propels a fine stream of abrasives. It's a safe, effective way to remove surface film . . . cut, shape or abrade hard, brittle materials. We'll be glad to test the process on your sample parts. For further information, just write to

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Los Angeles 6, Calif.



Giant blockhouses will handle test preliminaries and firing of giant Titan ICBM sometime next year.

dillos, the area's most bothersome natural pest.

• **Out of the Pines**—From a distance, Canaveral's most impressive feature is the array of giant gantry cranes or scaffolds jutting grotesquely up from the scrub pines. But at closer hand you get more of the test area's atmosphere from the blockhouses set some distance behind the gantries—blankly ominous from the outside, teeming with control equipment and men inside. Clad in loud sport shirts and loafers much of the time, the men are relatively youthful (average age: about 32) for the seriousness of their task. Almost all, civilian and military alike, are engineers by training, and they often work 18 hours at a stretch with only a couple of coffee breaks (from the "Missile Chuck Wagon") for relaxation. These are no long-hair scientists—instead, they could almost be categorized as smart mechanics. Perhaps most striking of all, their talk sounds like dialogue in an

outer space comic strip of a decade or more ago: At chow time, you hear, "Let's blast off for lunch," and a test conductor before a launching sounds even more Buck Rogersish with his "T minus 380 degrees and counting," "telemetry in launch condition," and so on.

### I. Canaveral's Mission

Along with Patrick Air Force Base, 18 miles down the coast, and a chain of nine monitoring-tracking stations stretching 5,000 miles down into the South Atlantic, Canaveral is the final test station for the development of Air Force rockets and missiles. On occasion, service lines are crossed to permit testing of an Army or Navy missile, and in special cases units of troops have even been maintained there for training in missile operations. But the main job of Canaveral's 16,000 scientists, engineers, and military personnel is to run the

Cameras with up to a 200-mile range  
supplement radar monitoring tests.



With no change in tube shape or size, new Sylvania VHO delivers as much light as  $2\frac{1}{2}$  standard fluorescent tubes



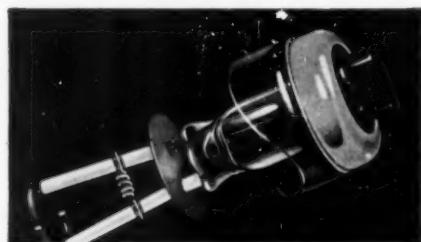
VHO means Very High Output

Another reason why

**Sylvania Fluorescents give you more light  
at lower cost than all other brands**

No other very high intensity fluorescents cost so little to buy and use—or maintain greater brightness throughout lamp life. The new VHO fluorescent lamp looks like any standard lamp—yet it delivers more than  $2\frac{1}{2}$  times as much light as lamps of identical size and shape. The initial cost of Sylvania VHO is appreciably lower than any other high intensity fluorescent lamps, and at no sacrifice in service or performance. VHO lamps keep operating costs to a minimum by giving you more effective, useful light than other high intensity fluorescent lamps.

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The secret of the VHO is the unique "Pressure Control Center" inside the tube. This exclusive development creates a cooler lamp interior that has enabled Sylvania to pack more than  $2\frac{1}{2}$  times as much light into a standard size tube.

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*Constantly doing things—better!*

*"...at Canaveral, development has been isolated both from research and from production . . ."*

STORY starts on p. 54

world's biggest missile development lab.

This lab represents a sort of revolution in military weapons development, which has traditionally been conducted on the model of the Army arsenal system. In that system (employed with missiles at Redstone, for example), the military takes direct charge of every phase of development—basic research, design, prototype construction, testing. This activity is usually all centered in one place, and everyone involved is directly responsible to the service.

• **Testing Alone**—Canaveral, by contrast, is part of a much more decentralized approach to weapons development. Primarily, its mission is only to test the prototypes of experimental long-range rockets and missiles, and to record and evaluate the data derived from the tests.

For a given missile, the Air Force hires a design contractor (Aerojet-General or Ramo-Wooldridge, for instance) to produce the design, usually from basic research farmed out in turn to subcontractors. When the design contractor comes up with a satisfactory design, it manufactures several prototypes—and only then does Canaveral get into the act, to test the prototypes. Even then, though, the civilian contractors and subcontractors remain responsible for the performance of their parts; if the guidance system goes wrong, for example, it will be sent back to the guidance subcontractor for adjustments. Naturally, engineers for all these companies tend to congregate at Canaveral during a test. Their job is done only when the weapon in all its complexity proves ready for production and a production contract is awarded—at which point Canaveral's job is done, too, at least for that weapon.

• **Division of Labor**—So at Canaveral development has been isolated from both its predecessor—research—and its successor—production. Canaveral finds out if a design will work, and if not, why not. Maj. Gen. D. N. Yates, commander of the Air Force Missile Test Center, says this division of labor was deliberate. The Army stuck to its arsenal system at Redstone. But the Air Force felt missile research was so new and complicated that it would be almost impossible to gather the necessary experts all in one place. Instead, it decided to farm out the job in bits and pieces, according to where the best talents and facilities were located. It was convinced it could manage the close supervision and coordination re-

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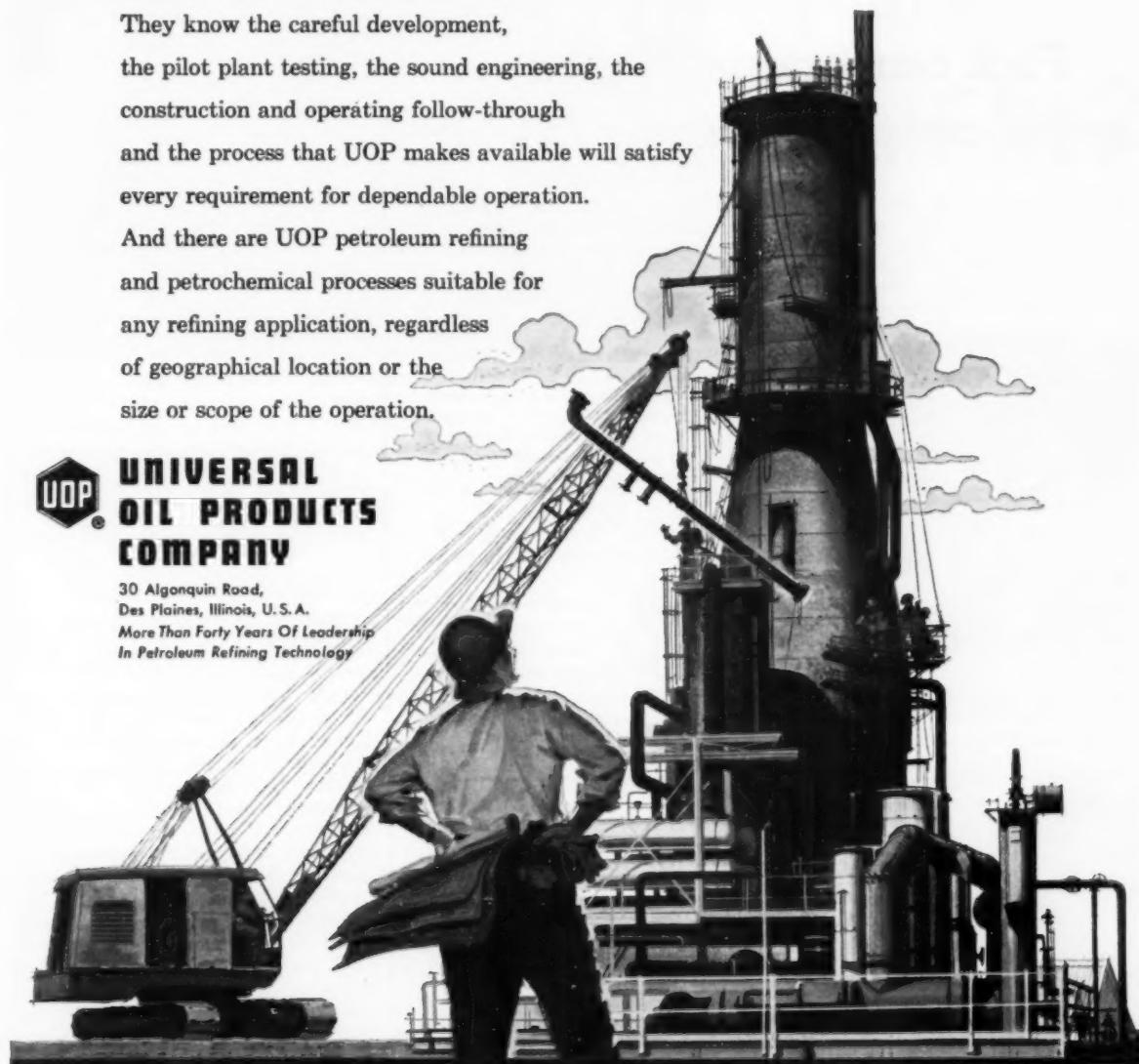
They know the careful development, the pilot plant testing, the sound engineering, the construction and operating follow-through and the process that UOP makes available will satisfy every requirement for dependable operation.

And there are UOP petroleum refining and petrochemical processes suitable for any refining application, regardless of geographical location or the size or scope of the operation.



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"... a development test lab should be confined to a development test lab . . ."

STORY starts on p. 54

quired when research is organized this way.

In addition, the Air Force system makes it possible to run early static tests—tests of equipment on the ground—at a contractor's own laboratories. Otherwise, the space and firing schedules at Canaveral might be almost hopelessly clogged, and the center would be distracted from its main purpose. For the same reasons, it was decided not to station missile training crews there.

• No Research GHQ—Likewise, Canaveral will never be a headquarters for Air Force research and development. In the early days of the Air Force, Wright Field in Ohio was both an administrative headquarters and an R&D center. And the aircraft industry tended to cluster around it. But now Air Force R&D is dispersed—to such places as Dayton, Ohio; Tullahoma, Tenn.; Bedford, Mass.; Rome, N. Y.; and Edwards Air Force Base, Calif. And R&D headquarters is at Andrews AFB, Md.

"The spot for Air Force R&D headquarters might change some day," admits Gen. Yates. "But it's a good bet that it won't be toward Canaveral." His philosophy for Canaveral is that "a development test lab should be confined to a development test lab."

Nor is Canaveral likely to become a hub of the missile industry. Under the Air Force system of decentralizing missile work, there's no real reason to produce missiles or missile components in the area. It would be much more logical to turn them out closer to the point from which they're to be fired.

### II. Canaveral at Work

But for its role as a center for long-range missile development, there's simply no other place in the U.S. so ideally suited geographically as Cape Canaveral. During World War II the home of the Banana River Naval Air Station, it immediately came to mind in the late 1940s when Air Force officers were casting about for a missile test site—and not only for its remoteness. Rockets fired southeast off the cape can fly 5,000 miles into the South Atlantic without ever passing over any major body of land. This is important, from the standpoint of safety.

Besides, islands right along the Air Force's 200 mile-wide firing path are strategically poised for tracking stations. The Air Force also uses a fleet of 50 to 100 small ships and some aircraft (including robot planes) to



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BW

monitor the big "birds." But the island stations do most of the tracking and data gathering.

• **Maze of Plumbing**—These stations, manned by 50 to 70 men each, employ tricky electronic equipment to keep track of how every part of a missile in flight is behaving. This can be a plumbers' nightmare, since from stern to nose a missile can consist of hundreds of thousands of pipes, valves, flow gauges, and electrical circuits. If any one of these goes wrong, the whole system can break down. But the tracking system is vital, both for down-range safety and for the sake of learning as much as possible from every test flight.

All the information collected by the stations and by any ships or planes is funneled back to Central Control at Canaveral as quickly as possible. This is a matter of a fractional second in the case of data from long-range radar. Other data, such as might be collected on camera film, takes longer to process. Then the scientists and engineers go to work to interpret it.

"Contrary to general opinion," points out Gen. Yates, "there is no such thing as an unsuccessful missile firing at Canaveral. The electronic equipment charting and recording what has happened or has failed to happen doesn't care whether a 'bird' flies 5,000 miles or burns up on its pad. Either way the engineers working on that particular missile project learn something."

• **Try and Try Again**—When the information has all been assembled, it's taken to a company hangar in Canaveral's industrial area, where another bird of the same family is being readied for flight. Laboriously tearing down the part (or parts) that misbehaved, company engineers—working with the military officers assigned to the project—adjust, readjust, and sometimes even completely rebuild the new rocket in the light of what they've learned.

If they have guessed right, the test of the next bird proves it—and U.S. rocketry moves one jump ahead. If something is still wrong on the next firing, the whole process of tearing down and building up is repeated over again.

• **Way to Save**—If a rocket were lost with every test, this method of development could be phenomenally expensive. Live firings are a necessity with solid-fueled missiles such as the Navy Polaris. But with liquid-fueled missiles, scientists have found a way to save time and money with some of the tests, by running static tests on the ground.

In a live firing, the project engineer in charge has, according to one estimate, some 80 single-spaced pages of check-out notes to go through in any one countdown. If one tiny item fails to check out exactly right, he calls a "hold" in his countdown until it's

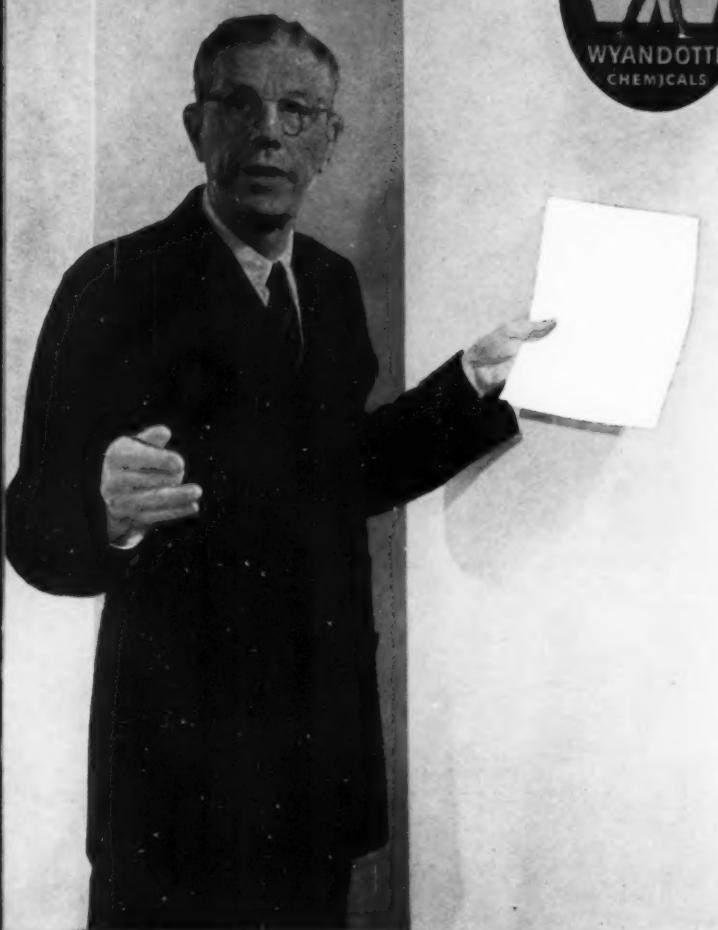


PHOTO BY BELLG

# "I've seen creative chemistry at work"

—says Lyman A. Beeman, pioneer in the manufacture of tinted Impact Book Paper

"When we took a hard look into the future and decided to make Impact Book—a colored paper for books, magazines, and other printed material—we faced many challenges," states Lyman A. Beeman, president, Finch, Pruyn & Company, Inc.

"To solve some of our chemical problems, I visited Wyandotte personally for firsthand data.

"Here I was introduced to Wyandotte's research director and his able staff. I was pleased to find that these men were familiar with pulp-and-paper procedures . . . were steeped in chemical technology, from how to make better pulp to how to get finer finishes. And that Wyandotte research has contributed importantly to our industry in the form of new and improved chemicals.

"That is what I call creative chemistry. We've found that Wyandotte has it at all levels.

"At Finch, Pruyn our progress is hinged on creative thinking. Take our Impact Book Paper, for example. Used with color-coordinated Text Inks, it provides better visibility, better legibility and seeing comfort for the reader. There is literally no end in sight to its sales possibilities."

Progress at Wyandotte is showing up in a number of ways—in exciting new chemicals . . . in geographical expansion . . . in physical growth . . . in tangible results for many of our customers. And almost every industry can benefit from it. You can, too, by contacting: *Wyandotte Chemicals Corporation, Wyandotte, Michigan. Offices in principal cities.*

## Wyandotte CHEMICALS

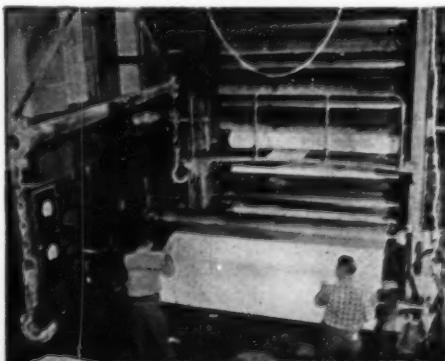
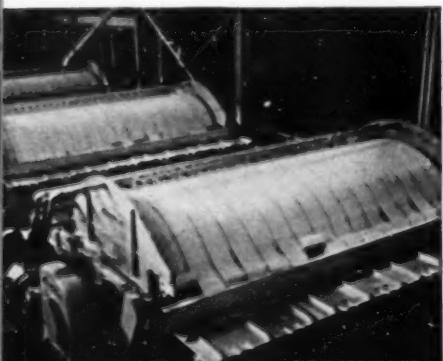
*Pacing progress with creative chemistry*

1 "The Impact Book Paper you see here could start a new era in printing," says President Lyman A. Beeman, of Finch, Pruyn—one of the country's leading paper-manufacturing and converting companies. "It's the result of deep-digging research into visual, psychological, and physiological factors affecting reading. Plus the cooperation of helpful suppliers, like Wyandotte."

2 "Chemicals from Wyandotte play an important role at Finch, Pruyn in the transformation of wood pulp to paper" . . . chemicals such as caustic soda and chlorine, used here to purify and brighten neutral sulphite pulp in three-stage continuous bleaching operation.

3 "Blended neutral sulphite and mechanical pulps end up as rolls of paper on giant winders . . . rolls that will become books or magazines or school papers to let Finch, Pruyn reach into practically every household." Wyandotte, with its diversified chemicals, touches every major industry.

4 "At Wyandotte, I saw this modern research center where skilled scientists are exploring new chemicals, improving present ones—preparing today for the needs of tomorrow . . . and I learned, at the source, how their chemicals would best fit in with our processes."





**Copper-Coated Strip**, shown before heat-treat at Victor Adding Machine, prevents distortion of precision parts during case hardening of working surfaces.



**Plain Steel** number dials are welded to precision-made Thomas Strip.

## Victor Adding Machine, Others Cut Costs, Improve Products With Thomas Strip

Manufacturers across the country are reporting new cost-cutting, quality-boosting results from their use of Thomas Strip's cold-rolled specialty steels.

At Victor Adding Machine Company, Chicago, for example, copper-coated Thomas Strip slashed one major production cost by 50% and made big savings in another operation.

Fred E. Rolli, Victor's chief engineer, says Thomas Strip is "the greatest single improvement in our production process in the past 10 years."

Here's why:

Victor's deluxe Model 75 contains 2500 individual parts, 68 of the most critical being made from Thomas Strip, both plain and copper-coated.

• **Distortion-Free.** Load-bearing parts—with tolerances under .001 inch, plus or minus, have to be case hardened along their sheared edges. Heat-treating plain steel (15 minutes at 1450 degrees) can warp the stampings. Often the expensive straight-

ening process caused tiny surface cracks which elongated the part past the .001-inch tolerance.

To solve this problem, Victor turned to copper-coated Thomas Strip. Since the electrolytic layer of copper stops off or blocks carburizing gases, flat surfaces of the stamped part are protected. Then, plain steel edges case harden properly. The part retains flatness and proper ductility. Since there is no distortion, piece straightening of copper-coated parts is eliminated. This accounts for the 50% reduction of the total straightening operation at Victor.

• **More Savings.** A second economy begins in the punch press. Die-life is a vital factor of production costs. Like other users of copper-coated Thomas Strip, Victor finds die-life between grindings is extended as much as 33%. This is due to the lubrication effect of the copper coating.

A third benefit: uniform temper and on-spec composition of Thomas Strip mean clean, burr-free sheared

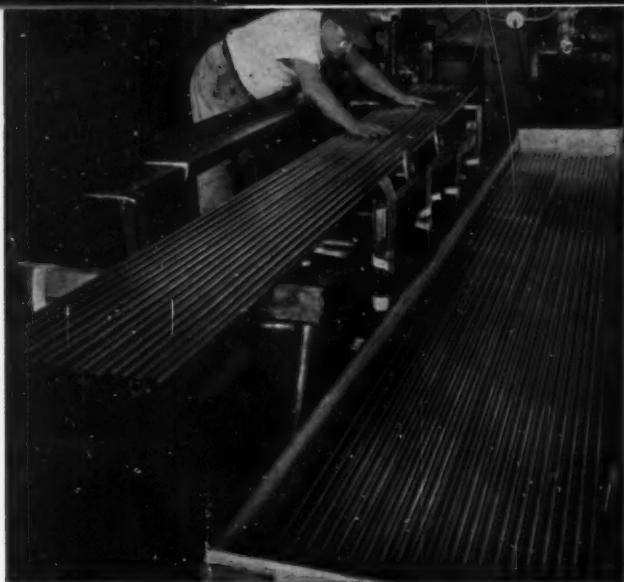
edges. Burrs, like slivers, are bane of close-tolerance operation of machine parts.

• **Satisfied.** Engineer Rolli sums it up by saying:

"Elimination of straightening is one of the biggest boons to small parts manufacturers that I've seen in the business. Even if Thomas Strip had no other benefits than eliminating a production problem, using copper-coated strip would be entirely worthwhile."

Thomas Strip's advantages are the same throughout industry. Other examples of how manufacturers cut costs, improve products—get higher profits and increase sales are shown here.

Thomas Strip's newly expanded and diversified production facilities give you the full range of products on these pages, in addition to zinc and chrome coatings . . . or hot-dip coated with lead alloy or tin. Uncoated Thomas Strip products include low carbon, alloy and high carbon spring steel grades.



**Steel's Strength, Brass' Beauty** are combined economically to form lock-joint tubing at Van Huffel Tube Corp., Warren, Ohio. Largest producer of rolled shapes in the nation, Van Huffel uses clear-lacquered, brass-coated Thomas Strip to make tubing for variety of products, including curtain rods and lamps. Thomas' brass and lacquer coatings easily withstand forming pressures and resist roll damage to the finish. Tubes usually need no further surface finishing. Van Huffel has been a satisfied Thomas Strip user for 26 years.



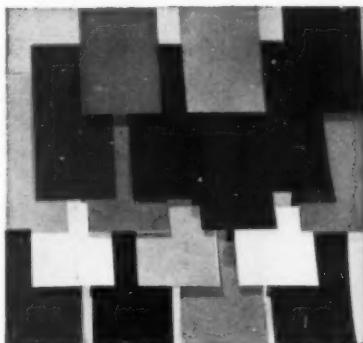
**Capacity Up 25%, Sales Up 45%** since Automatic Wire Goods Manufacturing Co., Bronx, New York, started using Thomas' nickel-plated strip 5 years ago. President Irving Spiegel says Thomas Strip boosted quality, kept production costs constant, improved appearance and design of his extensive Jewel and Automatic kitchen utensil lines. Thomas nickel-coated strip assures a mirror-like finish, an important feature of sales appeal in the highly competitive utensil field.

All Thomas Strip products can save you money and enhance your product in six important ways:

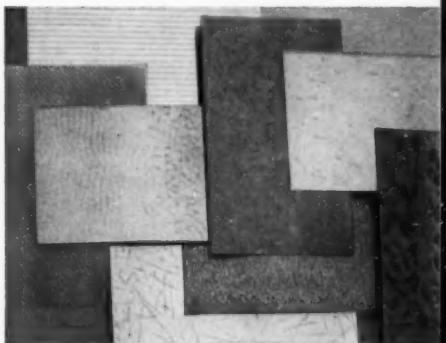
- **Fabricates Easily.** Coated steels stand fully as much fabrication as uncoated strip.
- **Longer Die Life.** Most coatings lubricate dies, reduce wear and increase tool life.
- **Maximum Pieces Per Pound.** Precision rolling to extremely close size tolerances gives more square feet of strip per ton.
- **Lower Plating Costs.** Coatings serve as final product finish or as base for further plating or painting.
- **Speeds Fabrication.** Thomas Strip coatings eliminate costly intermediate fabricating steps such as cleaning, buffing, even plating.
- **Steel's Strength and Economy** are combined with beauty and utility of more expensive metals.

All the savings and benefits Thomas Strip specialties are giving to fabricators shown here are available to you. A national sales staff—familiar with design and fabrication advantages of Thomas Strip is ready to serve you.

Write for samples, and additional cases of users' actual experiences with Thomas Strip products. Do it today!



The Rainbow's Range of colors, lacquered or painted on precision cold-rolled strip will solve your decorative and design problems. Thomas Strip's new lacquer line is the industry's finest. It's capable of wider widths in a fuller range of colors, especially pastel shades. Besides appearance, lacquer-coated steel is rugged and can be readily formed or mildly drawn without damage to the product's finish.



Unlimited Design opportunities come with pattern-rolled strip. New facilities enable Thomas to offer wider widths of any design and coating, including clear or colored lacquer. Users agree pattern-design enhances product sales appeal, permits production economies by eliminating piece buffing and costly further finishes. Pattern-designs stand up under tough forming operations and still offer attractive, flaw-free surfaces.

**Thomas Strip® Division**  
**Pittsburgh Steel Company**  
Grant Building • Pittsburgh 30, Pennsylvania



District Sales Offices:

Atlanta Cleveland  
Chicago Dallas

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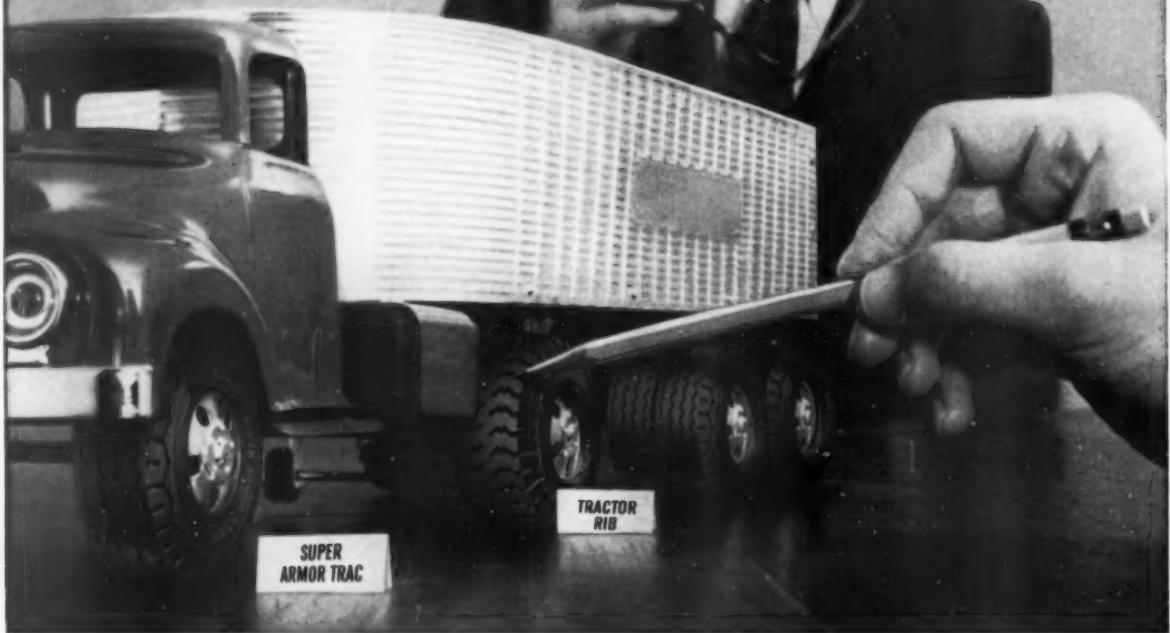
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Want the Best Nylon Truck Tire Value you can get?

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... engineered and built especially for use on driving wheels of tractors. Extra deep-grooved tread assures longer wear on all kinds of roads!

### SUPER ARMOR TRAC

... the tough, long-wearing truck tire built to give long mileage on original tread. Takes more and better recaps for additional low-cost mileage!

### THE EXTRA QUALITY IN KELLYS MEANS EXTRA MILEAGE ... EXTRA RECAPS ... LOWER COST PER MILE!

Your company can easily and safely save money on tires—no matter what type of trucks you use. How? By using Kelly Nylon Cord Tires.

Because Kelly Nylons are the toughest tires made, they (1) give safer, more dependable service, and (2) roll up far more mileage on the original tread, plus additional long mileage on the extra recaps they can take. You get

more miles—and safer miles—for every dollar spent. And that's true tire economy . . . the reason why Kellys, and only Kellys, are used on so many trucks and fleets of trucks.

It will pay you to get all the facts about Kelly Nylon Cord Tires. See your Kelly Dealer, or write to: The Kelly-Springfield Tire Company, Cumberland, Maryland.



IT'S THE BONUS MILEAGE IN KELLYS  
THAT MAKES THEM THE TRUCKER'S CHOICE

fixed. If it can't be fixed in a reasonable time, he "scrubs" the entire flight. Then he has to start all over again the next time.

Static testing eliminates much of this rigmarole. It also permits testing without use of the down-range tracking equipment. Since the electronic gear can't track more than one missile at a given time, range time is precious.

- **Nowhere to Go**—In a static test, a rocket is bolted down to its launching pad and its engine (or engines) fired. The exhaust fire pours out through vents called flame buckets in the platform. Performance is checked electronically from inside the missile's own blockhouse. The results don't measure up to a full flight test, but they disclose some flaws nonetheless.

Since the missile blockhouse is thus used to collect information during a static test, it has to be equipped with almost as much electronic gadgetry as a down-range tracking station. This blockhouse runs the show as long as the rocket is on the pad (when it's in flight, Central Control, two miles to the rear, takes over). And every blockhouse and every gantry for every missile is different. This means that the investment in ground equipment at Canaveral stands already at \$400-million—and will continue to mount.

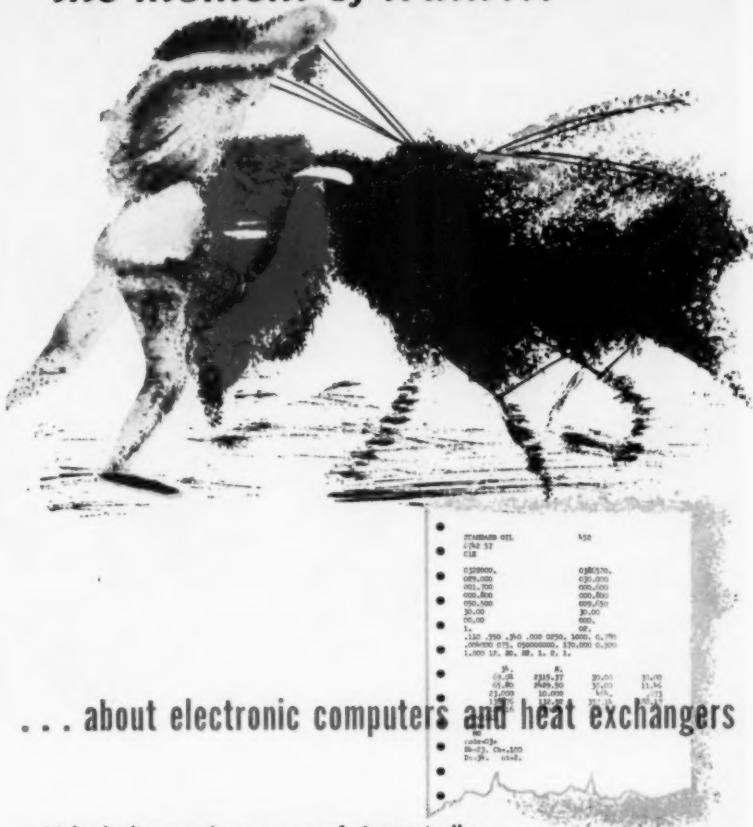
### III. Fringe of Industry

The need for support equipment will be the main factor drawing industry into the Canaveral area in years to come, Gen. Yates and his Air Force colleagues believe. A few specialized makers of electronic instrumentation have already appeared in towns up and down the coast from the test area; others are reportedly on the way. Half a dozen or so architectural engineering firms have located nearby, too, to capitalize on the construction at the cape. Bids go out to contractors across the country for new ground test equipment, but in practice nearby contractors have an edge, because the men who designed the equipment for the chief missile contractor are already ensconced in Canaveral hangars.

As more and more companies get into the missile business, new branch offices are sure to spring up outside the gates. And there will be more support plants such as Air Reduction's facility for making liquid oxygen going up inside the gates, too.

• **Human Growth**—But it looks as if the Canaveral area's future growth will stem mainly from the need for more brainpower, not missile hardware. The Air Force estimates 18,000 engineers will be working at Canaveral by year-end, perhaps 25,000 by 1960. That would be a 9,000 jump over today's 16,000—not counting dependents. This

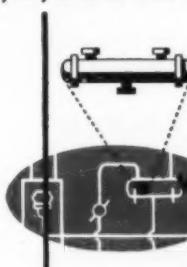
*the moment of truth...*



Nobody disputes the accuracy of electronically-computed findings or calculations, but in the solution of heat transfer problems, the electronic computer performs only one of several important steps.

At the core of Western's reputation for designing and building heat exchangers of true quality and long-life efficiency, is the step that follows our electronic computations: the precise and pertinent interpretation of these findings in the light of our engineers' combined experience in the heat transfer field, as well as an intimate knowledge of each customer's needs.

The results of electronic wizardry are valuable only if you know how to use them.



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Permanent savings result wherever Consolidated Safety Valves are used to guard steam generating facilities against overpressures. Regardless of service conditions, their reliable performance and long attention-free life reduce your costs.

Consolidated Safety Valves are made in bronze, cast iron and steel, with pressure and temperature ratings for every type of application. Sustained functional perfection is attained with the finest but fewest components. Precision craftsmanship assures tight closing. Whatever your working pressures in electric power or processing plant, in ship boiler or building heating system, specify Consolidated Safety Valves. You can be sure of positive protection at lower cost.

Industrial distributors in all principal cities backed by convenient regional warehouses are ready to serve you. We invite your inquiry.

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"... besides the influx of people the only sign of the industry moving into the area is Martin's plant . . ."

STORY starts on p. 54

influx will generate a big demand for all the things that are scarce today—housing, schools, water systems, roads, clothes, food, boats, fishing equipment, and so on.

At the moment, the highway system linking Canaveral with the Florida mainland is a real bottleneck. The only quick route is via a two-lane causeway, broken by two drawbridges—and 18,000 cars travel it daily. Brevard County is improving it but what's needed is a new bridge eliminating the draw spans, so that boats can't tie up traffic for eight miles in both directions.

Fortunately, the road bottleneck doesn't delay the arrival of missile prototypes, which come by air in converted C-54s (except for the Atlas ICBM, too big for a C-54, which crosses the country by truck). Fuel is shipped by barge or rail.

• **Exception**—Besides the influx of people, the only major sign so far of a missile industry moving to Florida is the new plant built 50 miles inland from Canaveral, at Orlando, by the Martin Co., general contractor for the Redstone and for components of various other missiles. But Martin doesn't send its Orlando products to the cape at all. They go instead to the Army's Redstone Arsenal in Huntsville, Ala. And the Army's rockets—as well as the Navy's—only get to Canaveral in some cases, for final tests requiring the Air Force's long firing range.

### IV. Starting Point for Space

Physically, Canaveral is constantly expanding to accommodate all the tests missile development requires. But at present, these are the launching sites available for trying long-range rockets:

Four pads in the Army area, serviced by two gantries and two blockhouses. From one of these pads, the first U.S. satellite, Explorer I, was launched, and from one of them the first Army shot to the moon will be attempted in August. Both Redstones and Jupiters can be set up and fired from any of the Army pads with very little shifting of equipment—which is not the case elsewhere.

Four pads in the Air Force Atlas-Convair area, serviced by four gantries and two blockhouses. Unlike the Army blockhouses, which have lead glass windows, these blockhouses are completely closed pillboxes protected by 15 ft. of reinforced concrete.

Four pads in the Air Force Thor-



## The heart of the bakery...in a capsule

**Capitol's Readco division increases production, improves quality and lowers costs of making your daily bread with its new idea for the baking industry: COMPACT AUTOMATION.**

Readco custom designs for major bakery equipment (proofer, oven, cooler) save tremendous amounts of valuable floor space . . . and are being installed in the most modern, completely automatic bakeries. And Readco mixing equipment is helping to improve processing and lower costs in the chemical, food, pharmaceutical, plastics and paper industries.

Capitol is a versatile company. Millions of America's homes are protected against the elements by Capitol aluminum prime windows, window walls, rolling doors and combination insulating doors and windows.

In addition, Capitol and its divisions supply products of aluminum to many diverse fields. Industrial fabricators get aluminum billets from Capitol furnaces, and extrusions from modern Capitol presses. Tanker crews tread gangways, catwalks and gratings produced by the Readco division. You'll find Readco light standards and guard rails, made of aluminum, on many streets and highways.

This sum of technical ability . . . creative design and engineering skills, complete facilities from ingot to extrusion and fabrication . . . can be put to work wherever light metals are involved.

Inquiries relative to Capitol's facilities and products are welcome.

**Read Standard Division**

**CAPITOL PRODUCTS CORPORATION**

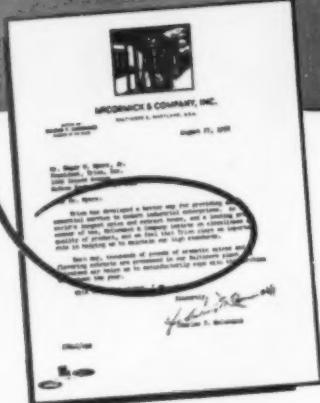
*Manufacturing facilities:* Mechanicsburg, York, Philadelphia, Harrisburg, Hazleton, Pa.  
Chicago • St. Louis • Sherman, Texas • Anaheim, California



# Men who build for the future choose TRION Clean Air

Read what "The Man with Ideas"—Charles P. McCormick, Chairman of the Board of McCormick and Co., writes about TRION:

"McCormick and Co. insists on cleanliness and quality of product... TRION plays an important role in helping us to maintain our high standards."

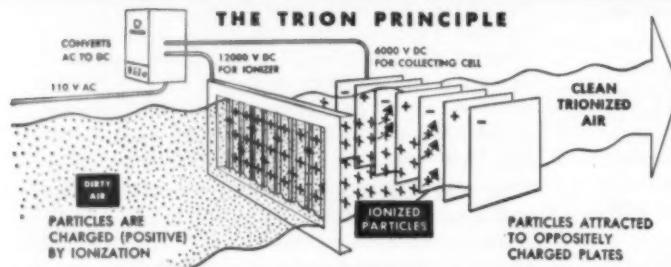


Thousands of pounds of spices and flavoring extracts are processed daily in the Baltimore plant of McCormick and Company. Trion Electronic Air Cleaners keep the air sterile clean. Airborne dust, dirt, smoke, soot, pollen, germs are practically eliminated. Trionized air in the offices also promotes employee health and minimizes cleaning costs.

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Trion removes practically all airborne particles, even as small as 1/2,500,000th of an inch, by National Bureau of Standards Dust Spot Test.

THE TREND IN MODERN BUILDINGS IS  
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Douglas compound, likewise serviced by four towers and two blockhouses, plus two sets of fuel tanks. One of these pads is currently in use by the Vanguard satellite crew; another is groomed for possible field test firing attempts with the Thor.

Four pads in the Lockheed-Titan ICBM area. Since Titan is the newest and farthest from completion of U.S. long-range rockets, none of its launching pads is yet ready for use. Its gantries, however, will be even more massive than most at Canaveral, because both stages of the two-stage Titan missile will be tested separately before being hooked together. This necessitates a wider gantry, with two flame buckets attached.

Other launching pads, for specific uses by contractor companies, dot the Canaveral landscape. One area is for test firing the Snark, a 5,000-mile air-breathing rocket. Another is the hanger-pad setup for Bomarc. A third is the launching site the Navy is finishing for its Polaris, the intermediate-range solid-fueled ballistic missile that will eventually be launched under water by submarines.

The first test firings of Polaris will be from land-based platforms designed to simulate underwater motion. But the Navy has dredged a 33-ft. channel into Port Canaveral in anticipation of the atomic-powered submarines that will be putting in to test Polaris later.

• **24-Hour Days**—In addition to all this activity, there's continual work by North American Aviation, Canaveral's "housekeeper," and RCA, the general contractor for support instrumentation. Construction crews by the dozen work around the clock almost every day.

Canaveral's industrial area is bustling, too. Seventeen hangars—so called because of their resemblance to aircraft hangars—are now in place; they bear such names as Boeing, Northrop, Ramo-Wooldridge, Avco, Arma, General Motors, and Aerojet. Inside each, a crew of engineers toils, usually in three shifts, to build up, tear down, and build back up again the missiles due for testing on the firing range.

• **Test Pilots**—With the pressure on the U.S. to produce reliable missiles and produce them fast, Canaveral's expansion is sure to continue. But its job will probably stay pretty much the same—that of a development lab. It may taste glory now and then—when the first moon shot succeeds, or man takes his first step into space. But over the long run, Canaveral's assignment is basically unglamorous.

Like the test pilot who puts a new plane through its paces, it will work hard at a tedious task—without much appreciation of the full scope of what it has done except from the scientists involved. END



## Box Seat Behind Home Plate ... with Mallory Mercury Batteries

*Wherever your vacation pleasure may take you, a world of news, entertainment and pleasure can go along—in today's pocket-size transistor radios powered by tiny, dependable Mallory Mercury Batteries.*

**L**ISTENING to the baseball game beside your favorite fishing stream is just one example of how today's compact transistor radios add to your enjoyment. Helping make their tiny size and high performance most practical is the "teaming up" of the transistor and unique Mallory Mercury Batteries.

Product of pioneering Mallory research, these amazing mercury batteries compress into miniature size all the performance of larger, conventional batteries—and more. Unlike ordinary dry cells, they show little loss of power when not in use . . . give steadier output . . . last far longer. In addition to eliminating the nuisance of frequent battery changes, they bring out the *best* in transistor performance.

At work in a variety of applications, from nearly-invisible hearing aids to guided missile control equipment, these versatile, dependable batteries are part of a complete family of battery systems developed by Mallory for personal, commercial and military uses. They are constantly finding new applications that bring increased convenience . . . improved performance.

This is but one development in the continuing stream of modern contributions from Mallory—the company *at home in tomorrow*—serving the nation's growth industries with precision products and broad experience in the dynamic fields of electronics, electrochemistry and specialized metallurgy.

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SERVING INDUSTRY WITH THESE PRODUCTS:

Electromechanical • Resistors, Switches, Tuning Devices, Vibrators  
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Conveniently located just outside Chicago's congested metropolitan area lies a broad belt of industrialized towns ideally situated for your new plant site. Here, midway between the rich resources of prairie croplands and the multi-million market of the big city, life can be rewarding on both a business and a personal level.

Transportation service to and from the city is unsurpassed. The nation's greatest network of railroads stems from Chicagoland to every part of the country. And excellent trucking, waterway, skyway and pipeline systems give you a real “edge” on cutting handling costs, both inbound and outbound.

For a pleasant and productive location that combines big city nearness with non-urban benefits—investigate ILLINOIS!



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Division of Industrial Planning and Development, State of Illinois, Springfield, Ill., William G. Stratton, Governor.

### MORE NEWS ABOUT MARKETING ON:

- P. 76 Population Trends Worry Marketing Forecasters.

# In Marketing

• • •

## Appliance Maker Woos Cautious Buyer With a “Peace of Mind” Bond Plan

Would-be appliance buyers who are holding off for fear their future pay checks may shrink are offered an incentive to buy in the “peace of mind” bond plan that Kelvinator Div. of American Motors Corp. is offering through its Refrigerator Discount Corp.

In effect, the plan merely formalizes into a merchandising device practices that financing companies are likely to use in cases of good customers who find themselves in a spot.

The copyrighted plan will cost the appliance purchaser 2% of the amount being financed. The bond entitles the purchaser to 12 coupons; each coupon entitles him to what amounts to an extension of his time-payment contract—either by reducing a given month's payment by one-half or by allowing him to borrow a half-month's payment. After he has made a month's full payment, he may use two coupons to get a month's extension.

At the end of the contract period, a customer may turn in any coupons he hasn't used and collect 10% of the bond's purchase price for each coupon. If he turns in all 12, he will collect a premium equal to 20% interest on the cost of the bond.

• • •

## Court Reverses “Favored Customer” Ruling, Orders FTC to Consider Sellers’ Relative Costs

A new court ruling has injected uncertainty in Federal Trade Commission prosecution of suppliers for giving special promotional services or allowances to favored customers. The Robinson-Patman Act says such promotional allowances may not be granted to some customers (usually large ones) unless they are made available to all competing customers on proportionately equal terms.

For years, FTC has had little or no trouble winning cases where it could show that allowances were not made to all customers on a proportionately equal basis. A supplier's only other defense was to say he had to make the discriminatory allowance to meet the competition of another supplier.

Now the U.S. Court of Appeals in Washington, D. C., says the FTC must consider whether differences in the cost of doing business with large customers justify differences in promotional allowances. The cost defense—always available in FTC cases charging direct discrimination—thus has been extended.

The new rule turned up in a court reversal of an FTC order against Simplicity Pattern Co., a leading manufacturer of ladies' dress patterns. FTC charged that Simplicity was illegally granting big chain stores free pattern catalogues and display cabinets for which smaller stores had to pay. FTC rejected Simplicity's attempt to use the cost justification.

The court, in a 2-to-1 ruling, said FTC is wrong and must allow Simplicity the chance to establish such a defense.

*your company is judged  
by the office you keep!*



**Cole's Modular Steel Desks . . .**

With good office space at a premium, expanding firms are using Cole Steel to gain greater per square foot efficiency out of existing quarters.

Cole Modulars are designed with interchangeable tops, panels and pedestals . . . in a wide range of sizes and colors . . . to meet changing office needs.

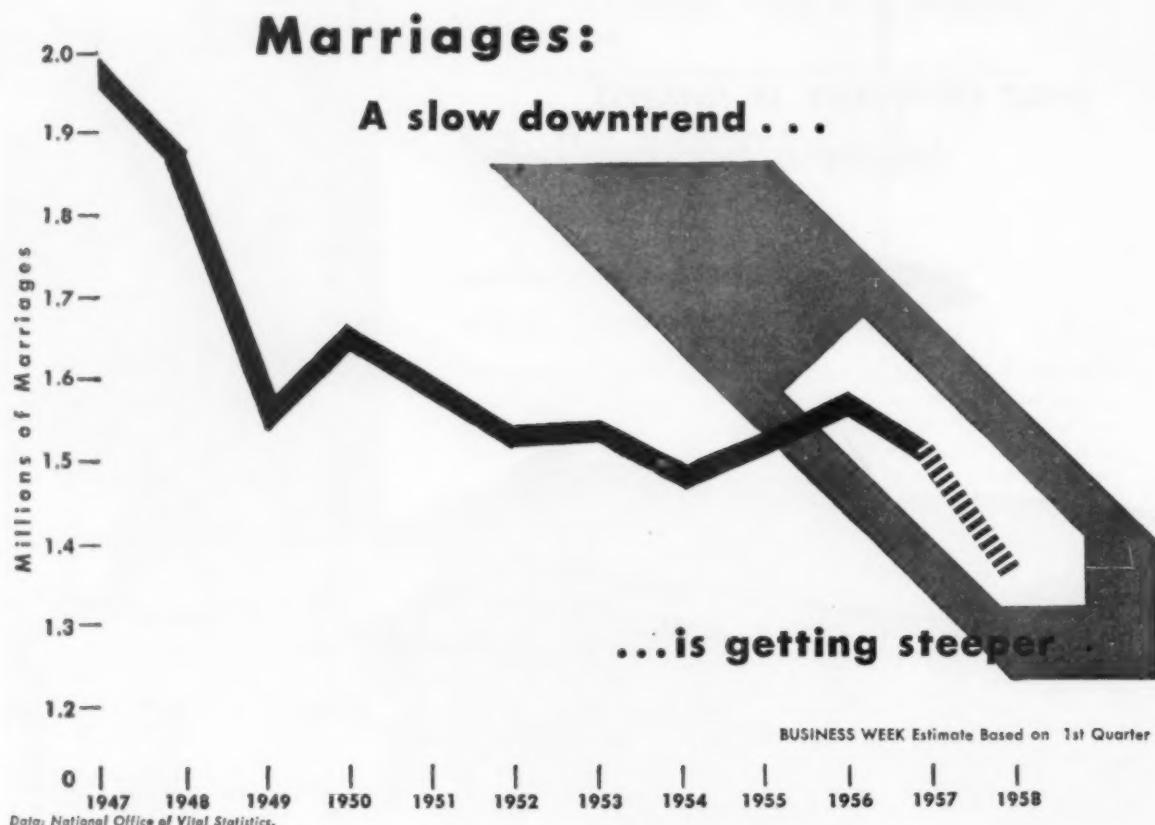
Create a "new look" for your office—with Cole.

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## Recession Blunts Cupid's Arrow

Population forecasters are worried about the effect the drop in new family formations will have on 1960 market.

Storm warnings are being raised on several fronts by population experts. Some of them see real danger that the current recession will last long enough to upset projections for a vast new market in the 1960s.

Already, as the chart shows, there is evidence that the recession is accelerating a natural dip in the number of marriages. In the first quarter of this year, the total was running 10% behind a year ago—a trend that, if continued, would carry the number of marriages below the postwar low of 1954. Population forecasters had expected some drop, because fewer people are coming up to marriageable age now. But marriage rates per thousand of population, too, have been slipping month by month since September, when the increase in unemployment became pronounced.

It's hard to say just how much of the decline in marriages can be blamed on

the recession. The fact is that the number of persons in the most marriageable group of 20-29 years has been declining both in total numbers and as a percent of population throughout most of the postwar period.

### I. Hollow Generation

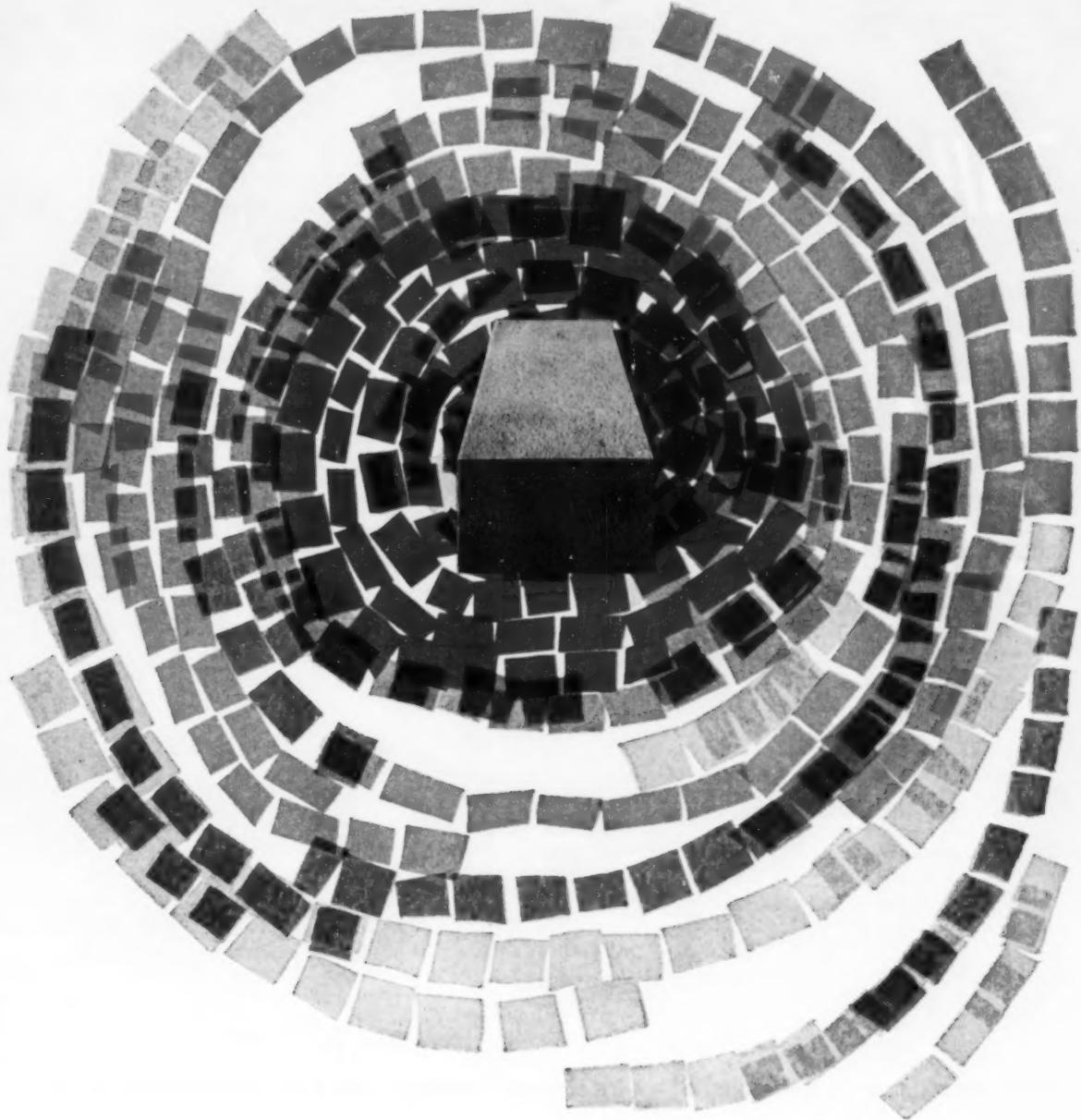
This decline, of course, is the result of the Depression trough in marriages and births. An upswing in the 20-29 and 30-34 age groups will start in 1960, but it will be 1965 before the children born in the first postwar year—the beginning of a sensational baby boom that hasn't stopped yet—will be near marriageable age. So, regardless of economic conditions, the number of new household formations in the next few years isn't likely to see much gain—certainly nothing like the eruption of the late 1940s.

But what worries the population statisticians is this: Despite a steady decline in the number of people in the marriageable age groups, marriages in fact have been running at a very high rate—about 100,000 a year above expectations, according to both the Census Bureau and the National Office of Vital Statistics.

• **Simple Economics**—Actually, the explanation is simple. People have been marrying at a steadily earlier age. Why? While there undoubtedly are many psychological reasons, from a strictly economic standpoint the long postwar boom and its resulting lush labor market made early family formations financially possible. The result has been a fairly easy decline in marriages despite a drop in the 20-29 age group population.

The question now is whether, in view of the recession, the unexpectedly high marriage rate will continue.

To those close to population trends, the answer is no—unless there is a relatively quick recovery. They point out



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*"...only a quick recovery from the current downturn in the economy can forestall another major population trough in 1959" . . ."*

**POPULATION** starts on p. 76

that unemployment has hit hardest at the marriageable-age group because of (1) lack of seniority and (2) fewer job openings for new entrants into the labor force.

Paul Glick, head of social statistics in the Census Bureau, comments: "Marriages are very sensitive to economic conditions and changes show up within a few months—even weeks at times—of business fluctuations."

Dr. Hugh Carter, marriage rate specialist of the Office of Vital Statistics, backs this up: "There certainly is a correlation between marriages and economic conditions."

Carter points to the declining number of applications for marriage licenses. In the first quarter of 1958, there were 94,031 compared with 99,640 in the corresponding period of 1957. In Wayne County, Mich., an area hard-hit by the recession, applications dropped from 4,223 in the first three months of 1957 to 3,772 in the 1958 period.

• **Implications**—The marketing implications of all this are obvious. Without question, part of the decline in hardgoods sales is the result of the sharp drop in household formations after 1950. That in turn stems partly from fewer marriages—although a good deal of it also can be attributed to the end of undoubling of families in the late 1940s as the big new housing developments blossomed.

This raises a vicious-circle question. Is the decline in hardgoods production—with its subsequent rise in unemployment—creating an even further drop in the marriage rate than population figures would indicate?

### **II. A New Trough?**

The dangers inherent in the current situation were pointed up last month at the National Industrial Conference Board's annual meeting by Pascal K. Whelpton, director of the Scripps Foundation for Research in Population Problems, Miami (Ohio) University.

Whelpton cautiously raises the possibility that the U.S. may be on the verge of a new population growth trough after "riding on the crest of a major population wave."

The previous population crest, he says, was from 1920 to 1924, when people were making up for World War I postponements of both marriages and births. This wave retreated to a new "normal" that lasted until 1931. Then the Depression coincided

with the downward trend of the wave, and the trough lasted until 1937. World War II laid the foundation for the present 11-year crest in both marriages and births.

Right after the war, marriages jumped to the all-time high of 2,291,000 in 1946, and the birth rate followed suit. Obviously, the release of millions of soldiers from the services was the cause. But both marriages and births stayed high, except for dips in 1948-49 and 1953-54. Whelpton says this was due chiefly to (1) a significant trend to younger marriages; (2) the fact that couples no longer postponed the first child; and (3) a tendency, although not so pronounced as the first two trends, toward larger families.

Now, Whelton cautions, "The main reason for expecting a downward slide to another trough is the fact that the trend toward younger marriage and earlier childbearing cannot go on indefinitely." He adds, "Even if the proportion who marry and have babies relatively young stabilizes at a new normal, there will be a substantial decline in marriage and birth rates."

The only offsetting factor is the continuation of an increase in the size of completed families which, Whelton points out, now depends more on how many children people want and think they can afford than on biological reasons.

• **Out of Kilter**—It is here that Whelton worries particularly about the current recession. He told the NICB conference: "Unless the present recession is checked, there may not even be a stabilization at a new normal, but rather a movement part way back to the former pattern of older age at marriage and slower timing of children after marriage. This will cause a large drop in the rates for births and population growth."

From a marketing point of view, this means that the upswing for the durable goods sector of the economy—which present projections indicate will start about 1960—could be thrown out of kilter.

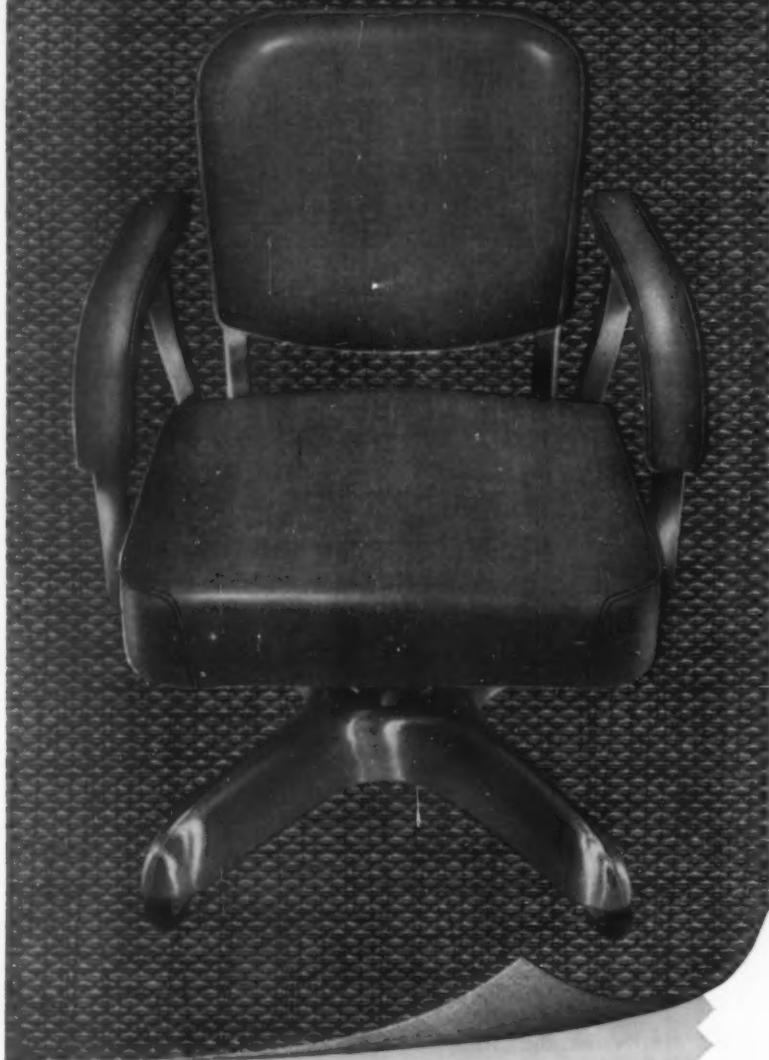
Whelton thinks that only a quick recovery from the current downturn can forestall another major population trough in 1959.

### **III. Births Affected?**

Actually, it's still too early to say that the recession has had any effect on the baby boom, which hit a new high in numbers last year and whose rate re-

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... 'even if the recession were to end tomorrow, the number of new marriages and new babies would continue to show the effects of unemployment' . . ."

POPULATION starts on p. 76

mained at the astonishing figure of 25.4 per thousand of total population. In the first quarter of 1958, the number of births and the birth rate were running behind year-ago figures—but the drop was very slight.

• **Cautious**—Dr. Deward Waggoner, head of the Natality Section of the Office of Vital Statistics, says: "It is only common sense to realize that economic conditions have an effect on birth rates." He notes the decline in births for the first quarter and feels there may be some connection—although he and others in Vital Statistics are cautious of making too much of the drop yet.

Certainly by June, however, you can expect to see a direct effect of the recession on the number of births. For one thing, the decline in marriages became most pronounced beginning in September. They have continued to decline compared with previous year's figures, so that the drop in births can be expected to continue during the summer.

In addition, there is the distinct possibility that couples who do marry may postpone their first child's birth.

Robert C. Cook, head of the Population Reference Bureau—a private research organization in Washington—says flatly that the recession "has cut the U.S. birth rate" already. He traces the beginnings of the recession to a date earlier than June, 1957, and thinks the tentative dip in first-quarter figures is the result.

Cook adds: "Even if the recession were suddenly to end tomorrow, the number of new marriages and new babies would continue to show the effects of unemployment for some months to come."

• **Slowdown**—Actually, what may be happening is a lower birth and marriage rate simply as a result of the population theory advanced by Miami University's Whelpton: With fewer people in the marriageable and heavy childbearing age groups, and with the earlier marriages and births reaching an almost irreducible minimum, you have to expect a dip in the sustained crest of the past 11 years.

But the population prophets agree that a sharper decline in births will begin to show up more clearly the longer the recession lasts. **END**



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# Where There's Slump, Recovery

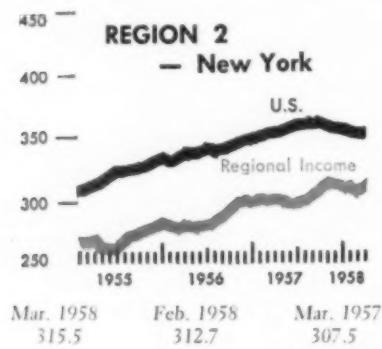
**Regional income index shows varied impact of the slump and varied rate of recovery.**

Over the years, BUSINESS WEEK's monthly Regional Income Index has demonstrated that it anticipates the income figures that are issued months later by the Commerce Dept. It is a composite of factors that reflect or produce income, such as department store sales, city and farm bank debits, and power production.

The latest index—for March—shows that U.S. incomes were 0.6% higher than a year ago. This was the smallest year-to-year gain since November, 1954. In six of the 12 Federal Reserve districts, March incomes were still above year-ago levels: Boston, New York, Philadelphia, St. Louis, Minneapolis, Kansas City. Of these, the largest gain was 6.5% in the Kansas City district.

• **Breaking It Down**—From February to March, the nation's income edged upward for the first month-to-month gain in seven months, though the gain is a scant 0.1%. Three regions—New York, Minneapolis, Kansas City—topped their February income.

By comparing the movements of a region's index with that of the nation, you can see how some have expanded faster and others slower than the country as a whole. One region, the Chicago Federal Reserve district, has stayed remarkably on the national curve. You can also see that the two most dynamic districts of the postwar era—Dallas and Atlanta—felt the effects of the recession before the nation as a whole felt them.



**T**HE REGION feels this recession more than the last one. That's because of the dominance of aircraft, autos, electronics, steel, and machinery in its industrial mix. Buffalo, which depends heavily on steel and autos, is the largest city in the area that is hard hit. Aircraft on Long Island and electronics throughout the state have suffered from

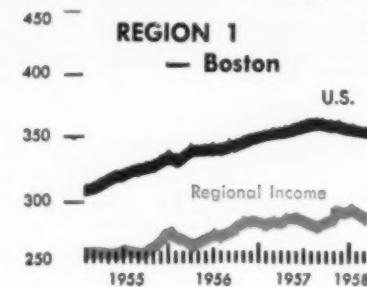


Mar. 1958	Feb. 1958	Mar. 1957
358.8	358.3	356.8

defense cutbacks. Machine tools and office machines have slumped.

Nondurable manufacturing has been riding a longer course downward, due to the heavy weight of textiles and apparel. However, New York City, the apparel center, has fared better than the region as a whole, with unemployment up only half as much as the area. Its strength lies in its concentration of employment in headquarters offices. The city's department store sales have helped to hold the region's decline to 1.5% below a year ago; Buffalo alone is off 5%.

Employment in non-manufacturing has been generally stable. Trade hasn't been hiring, but construction, government, and finance have been growing.



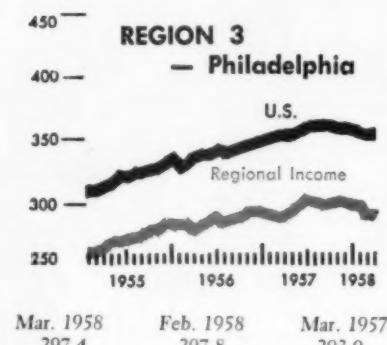
**N**EW ENGLAND has been expanding so slowly for so long that the recession has made little difference. Durable goods industries have felt it, of course, and the long decline in textiles has accelerated. Rhode Island has been hit harder than the other five states because all its industries—textiles, machine tools, and jewelry—are down at once.

The Federal Reserve Bank of Boston finds that manufacturers plan to spend 24% less this year than last on capital outlay. But federal contracts are expected to stimulate aircraft and electronics, and state and local spending is increasing, too.

The tourist industry looks strong. After a slow start, the ski season turned

out to be the best ever, and summer resorts also expect to break all records. Advance registration at children's camps matches that of a year ago; the most expensive camps fill up fastest.

Capital continues to grow in New England. Both life insurance and savings deposits are up.



**E**VEN in boom times, this region had a sizable core of unemployment, principally in anthracite mining and textiles, and its income has lately been slipping more than the nation's. Even the industries brought by the boom, such as U.S. Steel's Fairless Works and Kaiser Metal Products' plant at Bristol, Pa., have been heavily hit by the recession. Defense cutbacks are cramping work at the Philadelphia Navy Yard and Army Quartermaster Depot.

The region is not without bright spots, however. Among the better performers are electronics, missile parts, pharmaceuticals, printing, and publishing. Even oil refining has declined only a fraction.



**D**EENSE INDUSTRY has been hit by cutbacks, especially in aircraft, missiles, and electronics, but most civilian industry has held up well. The state of Washington is feeling the cut-

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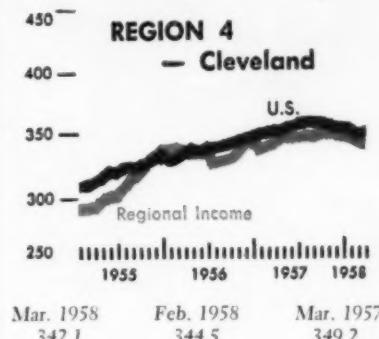
"77 ways to use magic marker"

**SPEEDY PRODUCTS, INC.**  
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backs at Kaiser Aluminum, and the long slump in wood and wood products is hurting Portland. But Kaiser Steel at Fontana, Calif., has been producing at 90% of capacity, partly because of demand and partly in anticipation of a shutdown to install new capacity.

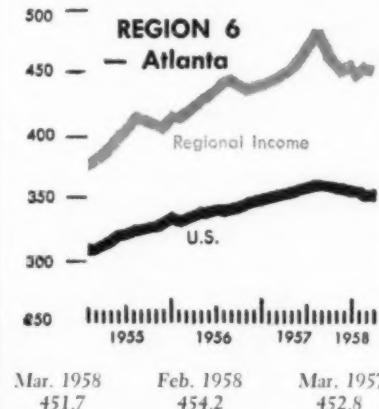
Construction, transportation, and trade are doing well. Food processing may shade off a bit because of heavy inventories of peas and corn.

Farming isn't so buoyant here as in the Midwest, because livestock plays a smaller role in this region. Heavy rains slightly damaged apricots and cherries but mostly only delayed planting. And the water has built up the supply in irrigation reservoirs.

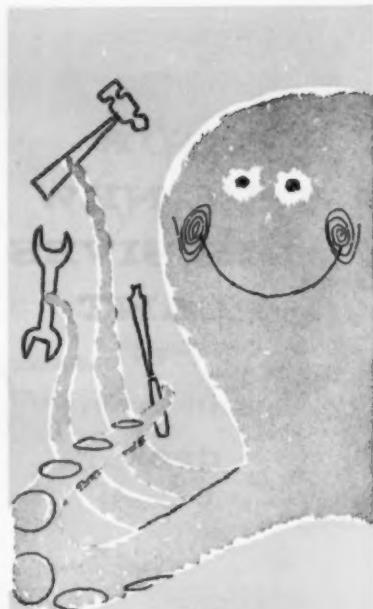


MASSING of durable goods manufactured in this region has caused it to feel the recession more severely than the nation as a whole. Metal fabricating, steel, and non-electrical machinery began the slide in December, 1956. Aircraft components followed.

Construction and trade have declined, but services and finance are up slightly. So is farm income, but it isn't a major factor—this is dairy country, and dairy prices are less dynamic than, say, live-stock prices.



THE SOUTHEAST felt the downturn before the nation did, due to a poor farm year and a sharp decline in construction. Crops were poor, acreage allot-



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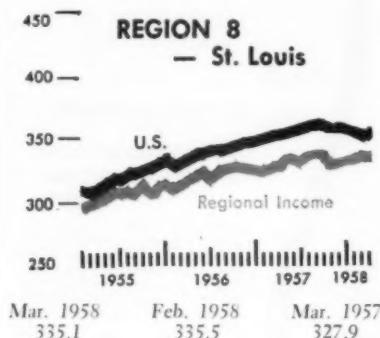
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ments were down, and the weather hit Florida fruits, vegetables, and tourism.

Pulp and paper had led the region's manufacturing expansion, and it has been leading, too, in the production decline. Last summer, autos and aircraft business began dipping, as textiles and lumber had already done.



**T**HIS REGION is so diversified that it behaves like a small model of the nation (chart). Michigan and Indiana are depressed by auto business; Iowa is up, thanks to cattle and hogs. In between lie Illinois and Wisconsin, riding industrial cross-currents. Capital goods are weak and construction machinery has inventory trouble, but gains in farm income have stimulated sales of farm machinery. In the Chicago area, steel is back to 63% of capacity.

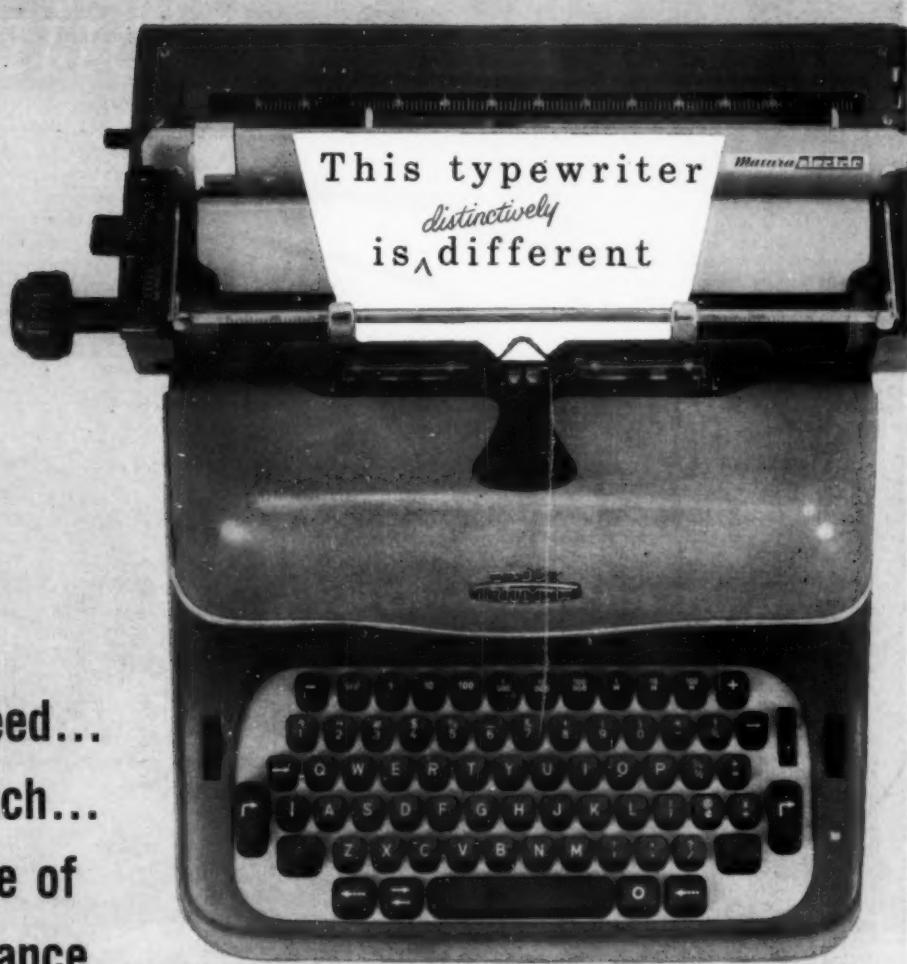


**P**REponderance of agriculture held the region's growth below the national rate for many years but now serves to cushion the recession. Last year, weather reduced crops in the Mississippi Valley; this year, farm income should be up considerably. Spring rains delayed the planting of cotton, the most important crop, but the outlook is now for a normal harvest.

In manufacturing, durable goods have been most deeply affected—automotive and ordnance plants in St. Louis and Louisville, appliances in Louisville and Nashville, aircraft in St. Louis. Coal mining has been off, and railroads have discharged workers. But construction and the lumber business are picking up,

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Well, had he been right, "Ole Dobbin" would still hold sway. Surreys and fringes might have picked up some further refinements—but we'd never have to be bothered by a fabulous automobile industry, atomic energy, Sputniks, Explorers . . .

**But somebody always keeps  
rocking the boat!**

That's the main trouble with the people at C&D Batteries. They're chronic "boat rockers"—all of them. Can't leave "well enough" alone. Never could. Why only the year before last, being interviewed on the occasion of C&D's 50th Anniversary, the late Leon A. Doughty (he was the "D" in C&D) remarked: "When you stop going forward, you don't stop—you go backwards." He was a boat rocker, too.

Not content with the accepted industry "standard" for industrial truck battery capacity back in '45, C&D rocked the boat. First they established a new standard . . . 20% higher . . . then kept "breaking the rules" by increasing capacity 10% and, only last year, by 10% again.

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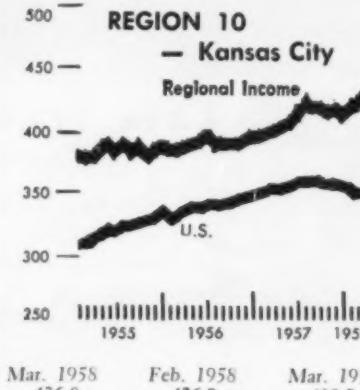
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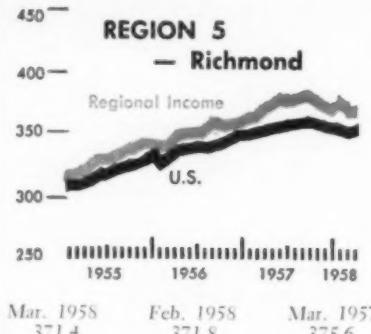
and steel in the St. Louis area has returned to operations at 80% of capacity.



**T**HIS DISTRICT, heavily dependent on farming, has recovered from the 1953-56 drought. In the first quarter, farmers' cash receipts were 21% over a year ago, compared with an 8% gain for the nation as a whole. Farmers' net is up substantially, too; their costs haven't risen as much as prices of their produce.

Farm recovery ought to accelerate this year. The wheat crop is expected to approach a record. Prices for meat animals have strengthened.

Manufacturing is mostly of the lighter type and hasn't been affected much by the recession. Auto manufacture is off, but not so steeply as in Detroit. Business loans have increased markedly in the last two weeks.

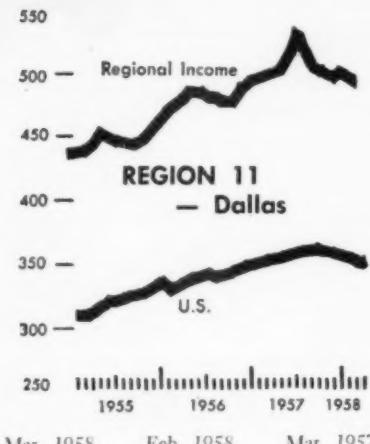


**M**ANUFACTURING EMPLOYMENT in the district is running 5% behind a year ago, despite strength in shipbuilding and cigarette production. Employment in the shipyards is 9% below a year ago, but the shrinkage is in the repair business—new construction of both tankers and dry cargo vessels is close to capacity. Newport News Shipbuilding & Dry Dock Co. says its backlog of orders should preserve the present level of employment through 1960. Cigarette production has been keeping pace with a year ago, but man-hours are 11% higher because of extra

labor that goes into filter-tip cigarettes.

Cotton consumption by textile mills in April fell 9% below the year earlier, though consumption in Virginia rose 18% above March, due to speculative buying on the chance that Congress might allow cotton acreage allotments to drop.

Paper manufacturing, mainly paperboard, has stabilized below 1957 levels. Construction and soft coal mining have dipped, and the coal slump has cut railroad carloadings sharply. Retail sales are down from a year ago.



**A**FTER RUNNING UP the biggest gains of all since the war, this region felt a dip in income even before the recession took hold. That's because of early shrinkage of earnings from oil and airplane manufacturing.

Oil production has dropped from 3.3-million bbl. a day in March, 1957, to the current 2.2-million bbl. Not only producers and their employees feel this decline; it extends also to people who draw income from royalties and leases. Suppliers such as Lone Star Steel Co. have cut production, too.

On the other hand, aircraft plants have not been altogether a drag on the region's economy. While Convair in Fort Worth worked its labor force down from 27,000 to 21,000, Chance Vought in Dallas has stepped up to an overtime pace. But it hasn't cut into the area's unemployment by hiring additional workers.

Lesser declines of income have been felt in potash, lead, zinc, and copper in Arizona and New Mexico and sulfur in Texas. Auto production is off in Dallas and Arlington, Tex.

Agriculture, however, is turning into a bulwark of the region's income. Rains last year and this spring are prompting predictions of a 75% increase in the wheat crop, and cotton and grain sorghums look good. The ranges are in excellent condition and, with beef

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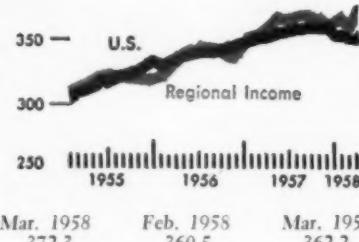
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prices up, cattlemen are beginning to restock the herds they depleted during the drought years.

"Small towns that are geared to agriculture," says an economist, "are more optimistic this year than anytime since 1949."

In other non-manufacturing industries, construction is reflected in a rise in VA and FHA applications in Dallas, Houston, San Antonio, and Fort Worth, while department store sales are off for the district, largely because of a 10% decline in the more industrial Houston. Dallas is even with last year, and San Antonio is 1% ahead. Coolness of this spring has reduced demand for electric power for air conditioning, but last week warmed up, with 99°F in Dallas.

### 450 — REGION 9 — Minneapolis



INCOME over-all has been boosted by farming, manufacture of nondurables, and such non-manufacturing fields as construction and tourism.

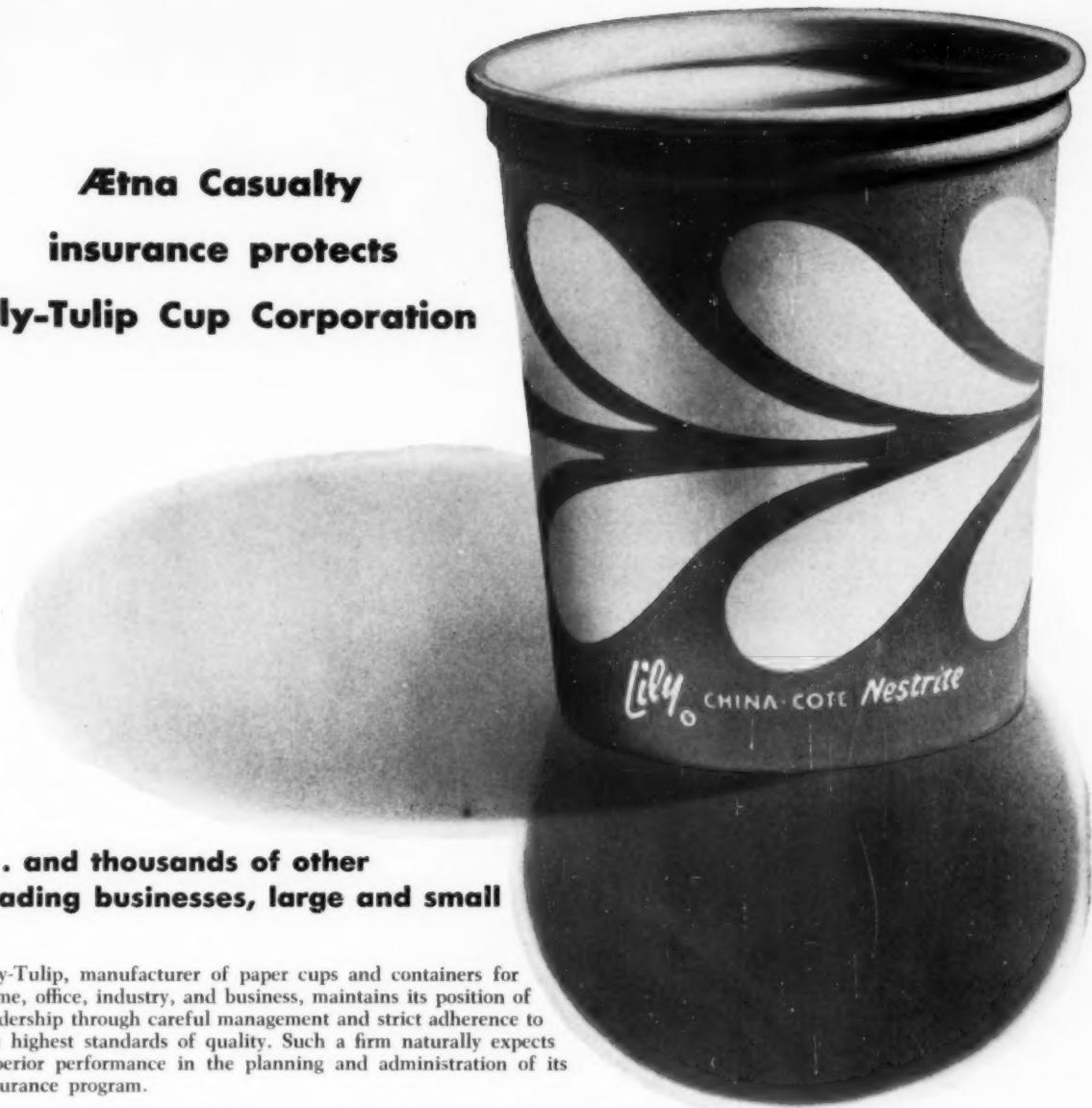
State by state, farm income varies sharply. South Dakota's is up 40%, for example, while Minnesota's is down 5% from a year ago. That's because Minnesota farmers decided to feed their corn to livestock rather than put it on the market; of course, they will benefit later when they sell the livestock. Meat prices generally are expected to remain firm, though an economist predicts hog prices will drop by autumn from \$22 a cwt. to \$15.

Throughout the region, housing starts are running 27% ahead of a year ago. Tourism has served as a sturdy prop for the economy. Last year, for example, it brought \$325-million income to Minnesota (compared with farm income of \$450-million), and the state expects a 20% gain this year.

Mining has been in a slump, especially iron ore on the Mesabi Range and copper in Montana and Upper Michigan. Ore shipping may be 40% below normal this year, making it the worst season since 1939.

Tourism becomes especially important in the depressed mining areas. Hundreds of men who would otherwise be digging ore are filling the demand for trained hunting and fishing guides. END

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Ætna Casualty has always endeavored to provide an *extra measure* of value, a higher quality of service and faster, more efficient claim handling than clients expect or could obtain elsewhere. Perhaps these are some of the reasons why more and more independent agents and brokers, in all parts of the country, are recommending Ætna Casualty insurance to their important business accounts.

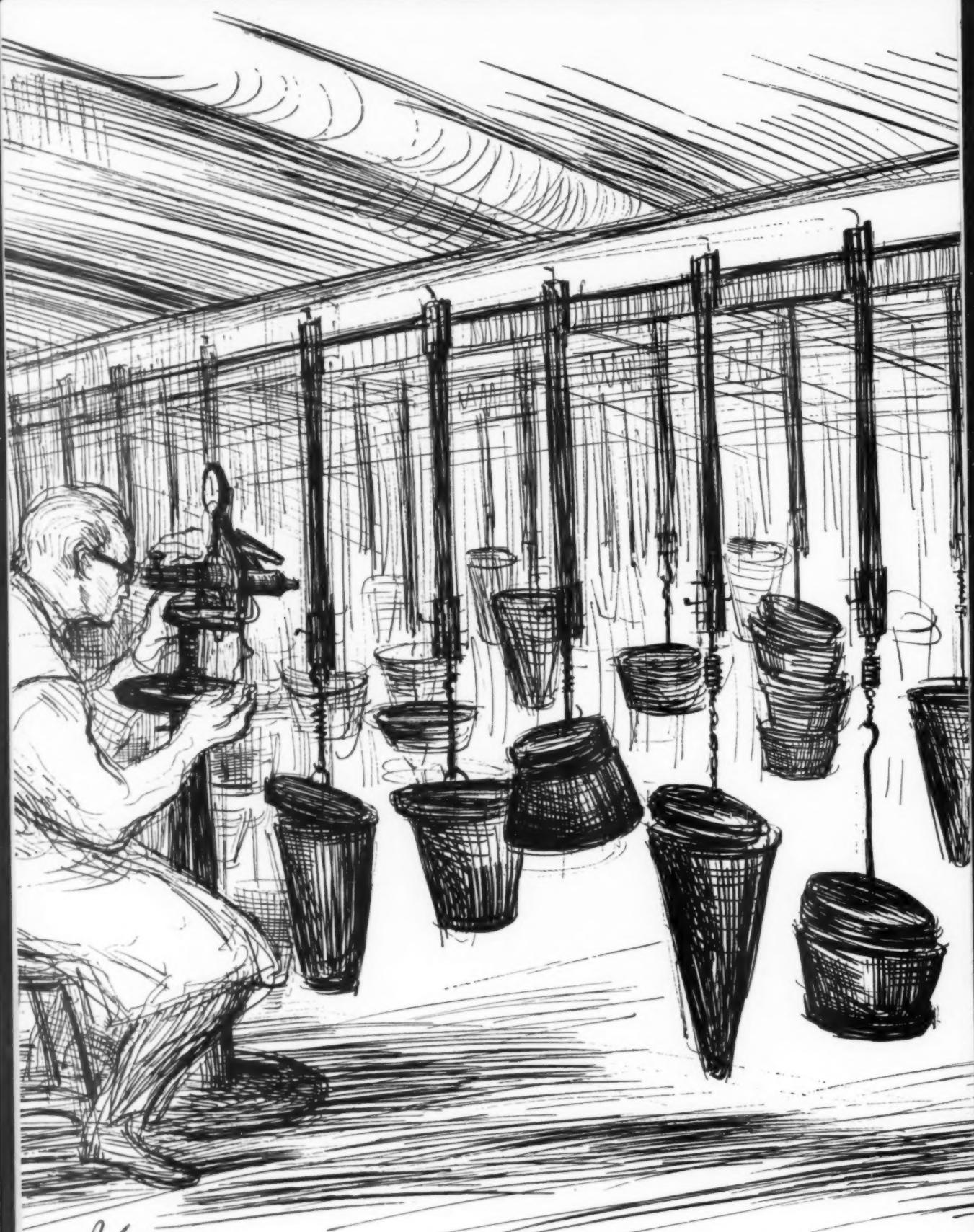


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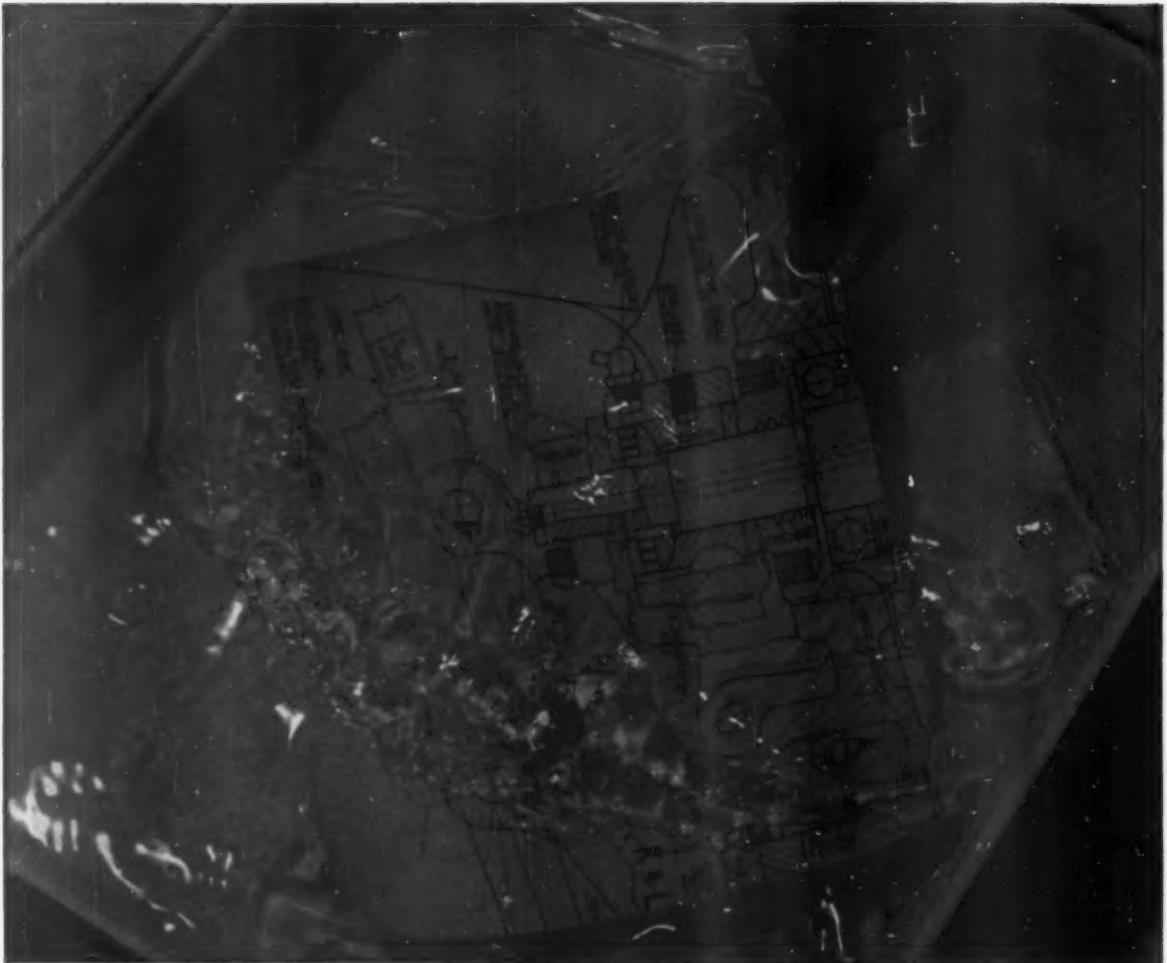


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## Fasson self-adhesives pass "acid test" and create a new product

Acids, alkalis and moisture used in the photographic developing process in no way affect the new self-adhesive printing paper developed by Fasson technicians for the Grant Photo Products Company of Cleveland, Ohio.

Result is a new product for industry that completely eliminates old-fashioned "messy" mounting methods for templates, engineering changes, aerial maps—any one of a number of diverse uses. By simply peeling off the protective backing after the photo has been developed, the self-adhesive photograph can be pressed into place. No paste, glue, rubber cement or moisture is needed.

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# INTERNATIONAL OUTLOOK

BUSINESS WEEK  
JUNE 7, 1958



The West is beginning broad reviews of its policies toward the Soviet Union and of specific NATO problems.

The National Security Council, under Pres. Eisenhower's orders, has begun to reappraise U.S. foreign and domestic policies.

This week, Britain's Prime Minister Macmillan will visit Washington for top-level policy discussions.

Following that, it's likely there will be direct talks between Eisenhower and Charles de Gaulle, France's new premier (page 28).

**These exchanges between the Western allies will certainly take months.** Biggest headache will be hammering out the host of problems raised by de Gaulle's takeover in France.

Washington and London feel that until there's a unified approach, along with Paris, in dealing with Moscow, it makes no sense to push talks for a summit meeting. Thus, the West will go slow in responding to the Soviets.

**That's in spite of Moscow's acceptance** this week of most of the West's terms for preliminary technical studies on nuclear testing and of international control of the Antarctic. Nor will the West be pushed toward the summit by this week's trade overtures from Premier Khrushchev.

Eisenhower and Macmillan will try to work out a common Anglo-American policy toward a wide range of issues—France, North Africa, Egypt's Pres. Nasser, East-West trade, and a summit meeting.

**They will also tackle broad economic problems.** The issue here is Britain's concern over the inadequacy of international monetary reserves to finance trade during slack times. The Administration's proposal to boost the reserves of the International Monetary Fund (IMF) will go a long way toward easing British fears of a liquidity crisis.

**Macmillan may also propose**—as he has done before—an Atlantic or Western economic conference. But the Administration will oppose this, on the grounds that free world economic problems can be dealt with more effectively on a case-by-case basis.

**Washington and London must also consider the new situation in Communist Eastern Europe.** It stems from Khrushchev's running battle with Marshal Tito in Yugoslavia, who has been following a Communist line independent of Moscow's control.

**The break between Moscow and Belgrade has now reached the intensity of 1948.** That was when Stalin tried to overthrow the Tito regime. In classic Stalin style, Khrushchev has denounced the Tito government as "imperialist spies." Following up Moscow's cancellation of a \$285-million loan to Yugoslavia (page 32), this outburst indicates that the Kremlin's policy now is aimed at bringing down the Tito government.

**A Soviet-bloc trade boycott of Tito, now in the making, will hurt Yugoslavia's economy badly.** That will force the Western powers to make up their minds on whether to bail out Tito again, as they did in 1948.

—•—

Despite complex problems overseas, Washington is rather optimistic. In the Middle East, it may be possible to head off a showdown with

# INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK  
JUNE 7, 1958

Nasser and Khrushchev over Lebanon (page 117). Beyond that, there's a growing hope in Washington that a working relationship can be reached with Nasser. That in itself would increase political stability in the area.

In Indonesia, U. S. officials claim to see signs that the anti-Communist forces in the army and the government are gaining strength. If true, that might force Pres. Soekarno to back away somewhat from his generally pro-Communist policies.

Elsewhere, officials point to the heartening outcome of the Japanese and Italian elections, the mildly anti-Communist line being taken by Prime Minister Nehru in India, and Britain's steadily rising gold reserves—now amounting to \$3-billion.

— • —

The Administration will have to decide whether—and how far—to yield to West European pressure for more trade with the Soviet bloc.

The U. S. is fighting a rear-guard action on this issue. Discussions in Paris, held by COCOM (a special NATO coordinating committee that includes Japan), to relax East-West trade are continuing. And the recession here is increasing the pressure for more trade with the Soviet bloc.

— • —

The Administration is gearing up for new demands from foreign countries for sizable financial help.

France will need emergency aid soon—and both Washington and Bonn are ready to come to the rescue, if all goes well in dealings with de Gaulle. Washington this week agreed to postpone a \$54-million French debt repayment coming due.

Continuing improvement of relations with Nasser's United Arab Republic (Egypt and Syria) and with Indonesia might also mean new outlays of foreign-aid money in Washington.

But it's a toss-up whether the Administration will be able to muster enough funds to meet all these expected demands overseas.

— • —

The new Development Loan Fund may prove a boon to U. S. companies.

Generally, foreign aid loans require that the host country buy equipment and materials for development projects under competitive international bidding. That yardstick applies to the new fund, too. But under a policy line laid down this week, the fund will permit host countries to make direct purchases here if:

- The prospective U. S. supplier has helped "create" the project in the foreign country.
- There's a limited number of U. S. and foreign suppliers.
- Host countries believe that U. S. equipment will be cheaper to buy and better quality.

— • —

Fear of new anti-U. S. violence has brought a postponement of Dr. Milton Eisenhower's goodwill tour of Central America. Embassies have advised there might be a repetition of the riots and personal attacks that Vice-Pres. Nixon encountered during his South American tour.

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**COMBUSTION  
ENGINEERING, INC.**

The huge riverside crane at Combustion's Chattanooga Division, capable of lifting loads in excess of 250 tons, is about to ease the reactor vessel into a 195-ft. barge which will transport it via the Tennessee and Ohio Rivers to Cincinnati. From there it will travel by rail to the Enrico Fermi Atomic Power Plant at Lagoon Beach, Michigan — 30 miles below Detroit.

## AMERICA'S LARGEST NUCLEAR COMPONENT

The nuclear reactor vessel shown here is the most remarkable stainless steel pressure vessel ever built. This 36-foot, 92-ton giant is the container for the nuclear furnace that will power the world's first full-scale, fast-breeder reactor power plant — the Enrico Fermi Atomic Power Plant. Designed by Atomic Power Development Associates, Inc., the nuclear section of this plant will be owned by Power Reactor Development Co., and the turbine-generator section by Detroit Edison Co.

Because of its vast size and complexity, the reactor vessel presented unique problems of design and fabrication. In reality, it comprises four separate cylindrical vessels welded together to form a single unit assembly, plus a large amount of internal shielding the fabrication of which involved the use of 65,000 square feet of stainless steel — all constructed and assembled with a precision never before attempted in

work of this size and character. Additional parts of the vessel, scheduled for later shipment, will bring its total weight to about 200 tons.

No more than two or three plants in the world presently have the skills and facilities even to undertake the production of work of this kind. Combustion not only has the men and machines, but also the experience to produce such reactor vessels. Moreover, it is equipped and qualified to design and manufacture all other major components of complete nuclear power systems.

The Enrico Fermi Plant exemplifies the continuing, urgent drive by electric utility companies to generate electricity at the lowest possible cost, utilizing all developments modern science and technology can produce. Combustion is proud to have shared in this major step of the power industry to prepare itself for the age of the atom.

## COMBUSTION ENGINEERING

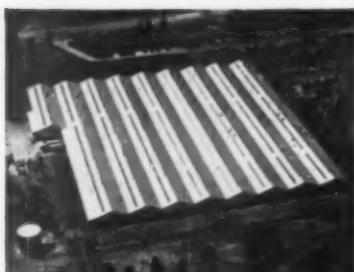
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# In Washington

• • •

## Congress Gives FHA Power to Insure \$4-Billion Worth of New Mortgages

Congress this week gave the Federal Housing Administration \$4-billion in new mortgage insurance authority. This permits FHA to hold as much as \$31.5-billion worth of insurance on mortgages. FHA last week reached the old ceiling of \$27.5-billion, and officials applied political pressure by ordering field offices to make no more commitments until Congress approved their request for \$4-billion in new authority.

Some liberal Democrats at first wanted to give FHA only \$1-billion in temporary new authority, holding back the remainder for inclusion in an omnibus housing bill as "veto insurance." The omnibus bill, due to come up late in the session, is likely to include features that could provoke a Presidential veto.

• • •

## FCC Says It Isn't Ready to Act Against Practices of TV Networks

The Federal Communications Commission is being nudged toward regulation of certain television network practices.

Chmn. John C. Doerfer told the Senate Interstate Commerce Committee it is "too early" for the commission to take a position either for or against a proposed bill that gives FCC direct authority over the networks. FCC now controls only individual stations.

The Justice Dept. points to three network practices as violations of the antitrust laws. These are:

- "Must buy" arrangements, under which an advertiser who seeks CBS or NBC network time must buy a minimum package of stations.
- "Tie-ins," in which networks allegedly sell the most desirable evening time on condition that advertisers use programs produced or owned in part by the nets.
- Option-time arrangements that require affiliated stations, with certain exceptions, to carry network programs 12 hours a day.

However, Doerfer says the commission doesn't want to act before it completes hearings on a special study of TV network broadcasting and recommendations concerning current practices.

• • •

## Congress O.K.'s Another Pay Boost, And President Is Expected to Approve

Congress approved the third part of a pay raise that, altogether, adds more than \$1.5-billion annually to the federal payroll.

This week's action gives \$542-million a year to 1-million white-collar workers in civil service and in the legislative and judicial branches. This approximates the 11% over-all increase that Congress approved and Pres. Eisenhower vetoed a year ago, but White House acquiescence is expected this time. In recent weeks, the President has approved general pay raises of about the same magnitude for military personnel and postal workers.

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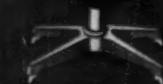
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Walter Jenkins of Allentown, Pa., (left), whose business doubled since he became a Western Electric supplier, meets with W. E. purchasing representative.

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—because people are appreciating more and more the convenience of having additional telephones.

—because American industry can't stand still—and to progress, industry relies on telephone service.

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**Western Electric**

MANUFACTURING AND SUPPLY            UNIT OF THE BELL SYSTEM

## LABOR

# USW Problems Worry Steelmen

**Companies wonder if McDonald will be able to keep his union under control and whether a basic shift in bargaining strategy may be necessary.**

Not all of the labor-management action these days is taking place in Detroit, however much it seems so.

While car builders and the United Auto Workers wrangle over a new contract, steelmakers and the United Steelworkers are looking beyond their immediate problem—a low operating rate and widespread idleness and underemployment.

Here's what they see:

- Union politics bubbling up to a preconvention boil. The prospect, you could theorize quite readily, is a turbulent, militant steel convention this fall—and not necessarily one completely under administration control.

- Industry preparation for next year's new contract negotiations clouded by some basic uncertainties. For example, who'll bargain for the industry? From what strength will he lead? How heavy will be the pressure for two predictable steel industry goals, both of which USW likely will view skeptically—(1) tying wages tightly to productivity, and (2) reducing, if not eliminating, the automatic cost-of-living factor?

- Big Question—Probably most profound of all the topics about which steel management speculates these days, though, is this: Must the steel industry now make a fundamental change in the grand strategy on which it has dealt with the Steelworkers for a decade or more?

### I. Bet the Wrong Horse?

That problem, which is under intense industry study today but for which there aren't any answers yet—and can't be before the steel union's convention this September—arises from several facts.

- Leadership Problem—As a matter of policy, steelmakers have preferred to bargain with a strong international union able to dominate its locals. The industry on occasion has deliberately done some things to strengthen the command position of the USW leadership, past and present.

Today, though, there are signs that the industry may be behind the wrong man. USW's Pres. David J. McDonald doesn't begin to show the leadership



**USW LEADERS, Pres. David McDonald, seated, and Secy-Treas. I. W. Abel, may be hardpressed again this year to keep opposition factions in line at USW's fall convention.**

stature that his predecessor, Philip Murray, did. When the union elected its top officers last year, McDonald almost lost to an unknown who headed an opposition ticket, revealing an incredible amount of anti-administration sentiment. And since that embarrassing experience, he has failed to make the inspiring comeback you'd expect of a genuinely strong leader of one of the country's principal unions. That failure is so marked as to be conceded freely by USW members. You can even find steelworkers who wonder whether, at this point, McDonald ever can make that kind of comeback.

- Possible Risk—As a result, today, steelmakers who bargain with the McDonald forces are asking themselves whether they aren't risking the possibility that they'll make contracts with people who, increasingly, won't be able to enforce them. And if we are, they go on, hadn't we better decide whether this is very smart.

That's a pretty shattering concept to examine. It not only implies a thorough revamping of an established policy, but also, perhaps more dismaying, it implies a less monolithic industry approach to steel bargaining—more emphasis on the thorny problems of living with the locals, less union discipline, more divide-and-conquer tactics to contend with, less mutual assistance among

producers at bargaining time, more disparity in wage costs.

That's not to imply that all these changes will arise fullblown on July 1, 1959. But if steel were to decide it has indeed been betting on the wrong horse, each would become real. Almost any of them would make a steel bargainer shudder. The smaller the producer, the more he'd shudder.

### II. Leader in Name

Today, steel's soul-searching probably is a little less severe than that in the USW, since the union's problem is more immediate. Here's why:

- Shortly, USW locals will elect officers.

- The men they pick will have two functions. Short-term, they'll be the core of the delegates to September's convention. Longer term, they'll be the people through whom the international leadership will have to operate to run the union.

- Election Worries—Some important people in USW are worried about whether local elections will produce a significant bloc of anti-McDonald strength. In the year or more that has elapsed since McDonald's election rebuff, there hasn't been really effective fence-mending action. If you ask what are McDonald's problems, you get the

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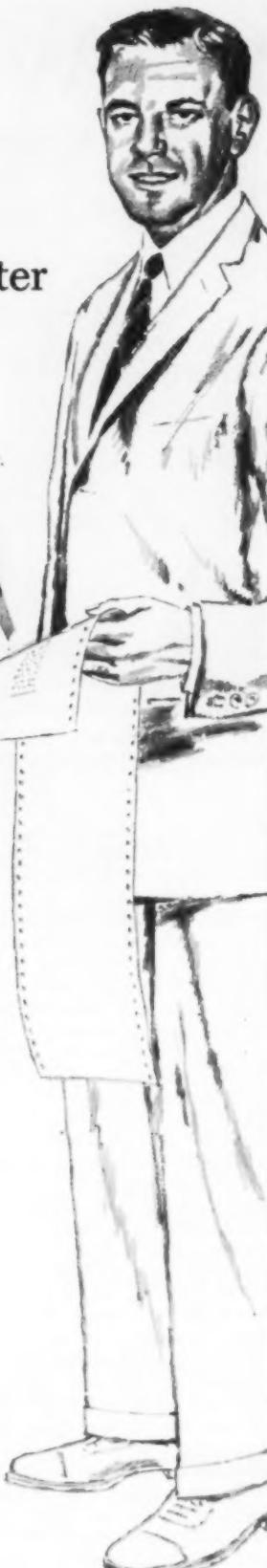


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**"...the opposition is as active today as it was at election time, and harder to put down . . ."**

**USW PROBLEMS starts on p. 99**

same run-down around Pittsburgh today that you got before the election. Only the examples and anecdotes are new.

It's not unanimous, but within the union and without, you can find agreement that the opposition is as active today as it was at election time. Only today, it's a lot harder for the administration to identify and put down.

• **Contract Issue**—Another thing that worries some of the people closest to power in the USW is the proposal that the USW not insist on the contractual wage and fringe benefit boost due July 1. McDonald has sneered at that suggestion.

But some people wonder if he won't be more vulnerable than ever if, after steel wages and prices go up July 1, the U.S. economy stays down or turns down farther.

**III. Arm Around the Throat?**

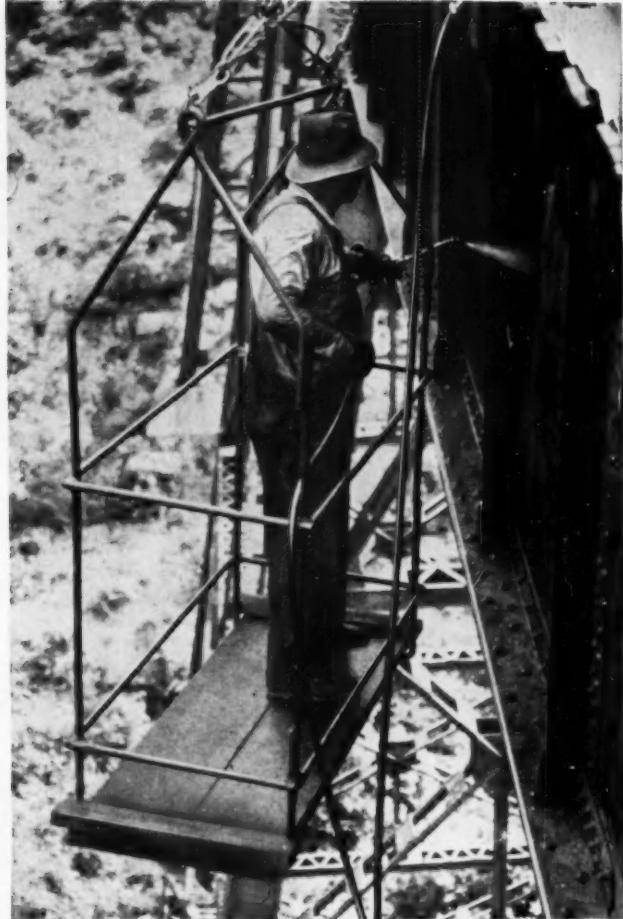
In Olympia, Wash., last week, Ph.D. degrees in industrial relations were awarded McDonald and his friendly enemy, John A. Stephens. The citation recognized the "industrial statesmanship" of McDonald, as head of the USW, and Stephens as the U.S. Steel vice-president who negotiated not only for his own company but, as a practical matter, for the entire industry.

Ironically, as the degrees were being awarded, it was a question whether the very structure of industrial statesmanship in steel's management-labor relations—which each man labored so hard to erect—is in real danger.

"For some time," says one steel negotiator, "we had what you might call an arm-around-the-shoulder situation with the steelworkers. I hope it doesn't become an arm-around-the-throat situation."

Why? In part because two principal architects of increased maturity in steel's management-labor relations are now on the sidelines. They are Ben Fairless and John Stephens, who is semi-retired (BW—Feb. 15 '58, p133). The third, McDonald, now carries far less prestige than he did (BW—Nov. 9 '57, p162).

• **Head Bargainer?**—In part, it's because only U.S. Steel knows who'll be bargaining for it, and what he'll have in mind. R. Conrad Cooper, who is now executive vice-president in charge of personnel services, is pretty widely—although not exclusively—figured as head



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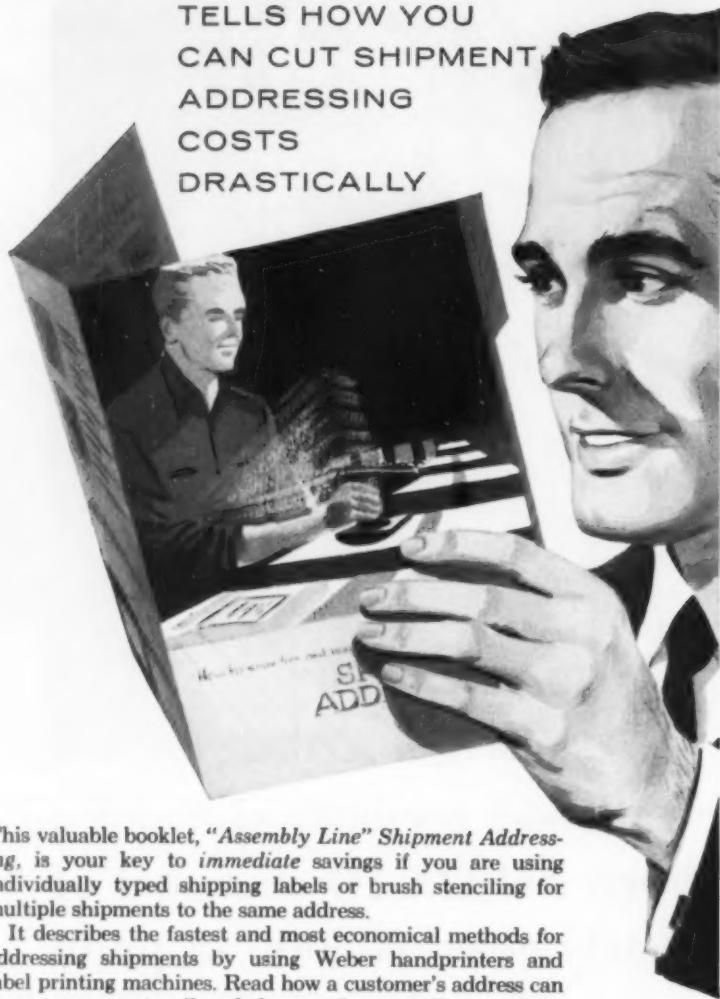
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bargainer replacing Stephens. He'll have Stephens' counsel and the experience of Stephens' time-tested negotiating crew.

But he'll carry a good deal more corporate muscle than Stephens ever did, because of his title and the functions it covers. Couple that with the Corporation's known discontent with the trend of labor costs, and you have to assume that the Corporation will be insistent on something different and more advantageous out of the next labor contract.

- McDonald's Record—Opposed to that will be McDonald's impressive record as a bargainer. For example:

- In his presidency, steel's straight-time hourly rates, which for years had been a little behind autos, have gone more than 10% ahead of autos.

- While the United Auto Workers, arch rival of USW in industrial unionism, got supplementary unemployment benefits first, USW got it better.

- There's nothing directly comparable in autos, but McDonald won premium pay for weekend work for the steelworkers—a major concession.

- And in pensions and cost-of-living clauses, USW competes effectively with UAW.

On the strength of such a showing, you'd wonder why McDonald is in trouble at all in his union.

One reason is that McDonald has never won popular acceptance in the union. He was Murray's protege, and never a mill worker as USW's rank-and-filers see themselves. There is no feeling of closeness or of real sympathy for McDonald.

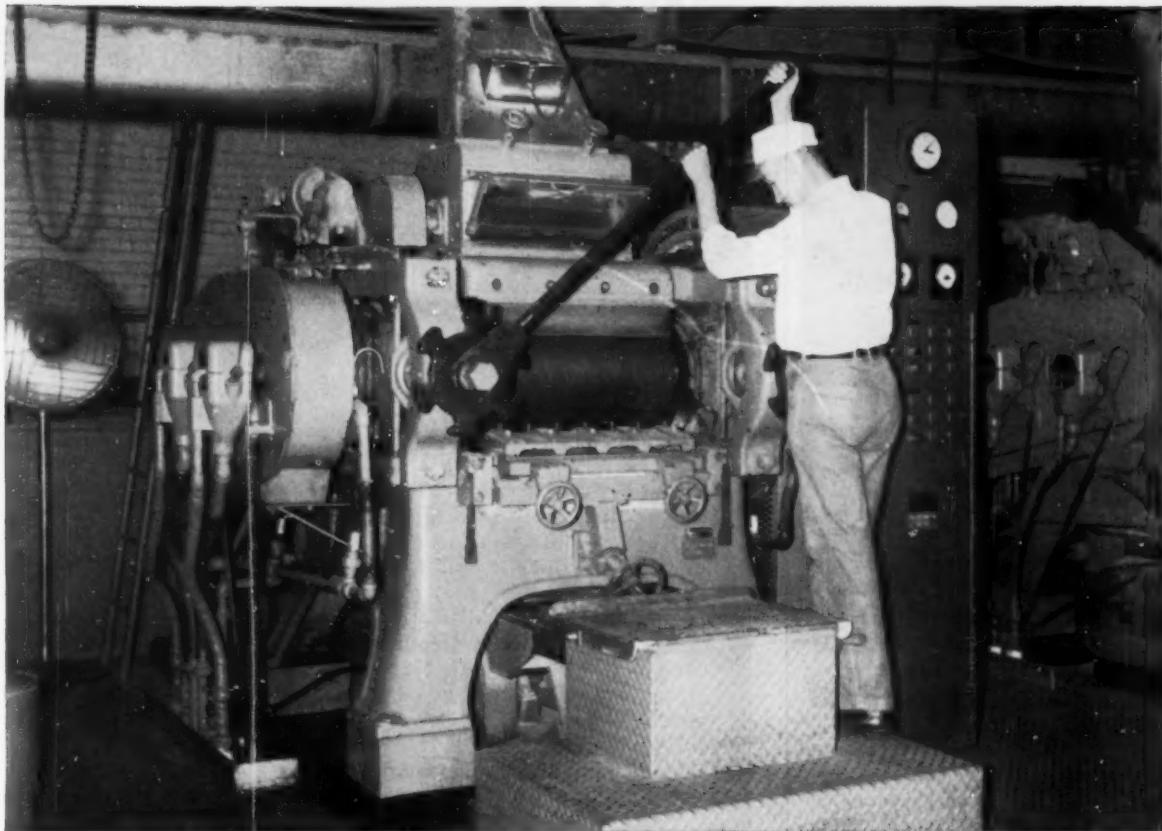
Moreover, in succeeding Murray, McDonald stuck to policies that were often autocratic. But, what they accepted in the way of centralized power during Murray's time, the union rank-and-filers resented when McDonald took over. Indeed, they reacted sharply against a show of power when, for example, McDonald put through an administration-favored dues increase at the last convention. The added cost was not as much an issue for the members as the "machine" tactics in getting it passed.

What it all comes down to is largely this, as put by one of Pittsburgh's best-informed labor-management people:

"In running a big labor union, two things are vital. You've got to turn up some fat gains for the membership and you've got to be a good enough politician to keep firm control. Nobody has done better than McDonald for his membership, but he simply hasn't done the politicking."

That's what really worries the USW people as their convention approaches, and that's what worries the steel industry as it prepares to write the next steel contract. **END**

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# In Labor

• • •

## Cement, Communications, Electrical Unions

### Settle for Moderate Raises in Pay

Tension eased in several important collective bargaining areas over the last week.

One of the nation's largest cement producers, Ideal Cement Co., Denver, Colo., and the United Cement, Lime & Gypsum Workers signed a one-year agreement for a raise of "about 10¢ an hour," including an 8¢ boost in basic pay and a half-cent more in between-jobs increments. Minor concessions were also made in pensions and Sunday premium pay. The union says the 10¢ settlement is the minimum it will accept in negotiations with other major companies (BW—May 31 '58, p42).

The Western Union Telegraph Co. negotiated new two-year contracts with the AFL-CIO's Commercial Telegraphers Union and a New York area independent, the American Communications Assn. The pacts call for 11¢ in raises—6¢ immediately and 5¢ Sept. 1.

The International Union of Electrical Workers settled for raises of 5¢ and 7¢ an hour in negotiations with Philco Corp. and Radio Corp. of America. RCA's 15¢ wage and benefits package—including 2¢ to 8¢ an hour additional for skilled workers—was negotiated under a reopening clause in a two-year agreement expiring June 1, 1959. The union agreed to extend the term into 1960, with another wage reopeners next April.

• • •

## AFL-CIO Agrees to Bargaining Talks

### With Federation of Its Organizers

AFL-CIO officials are sitting as employers at the bargaining table with representatives of a union they tried to block. The federation agreed to bargain with the Field Representatives Federation—representing 115 AFL-CIO organizers—after the National Labor Relations Board set a representation election (BW—May 24 '58, p126).

The FRF is the fifth union to bargain collectively with AFL-CIO. The others are the American Newspaper Guild, the Building Service Employees, the Office Employees International Union, and the Hotel & Restaurant Employees.

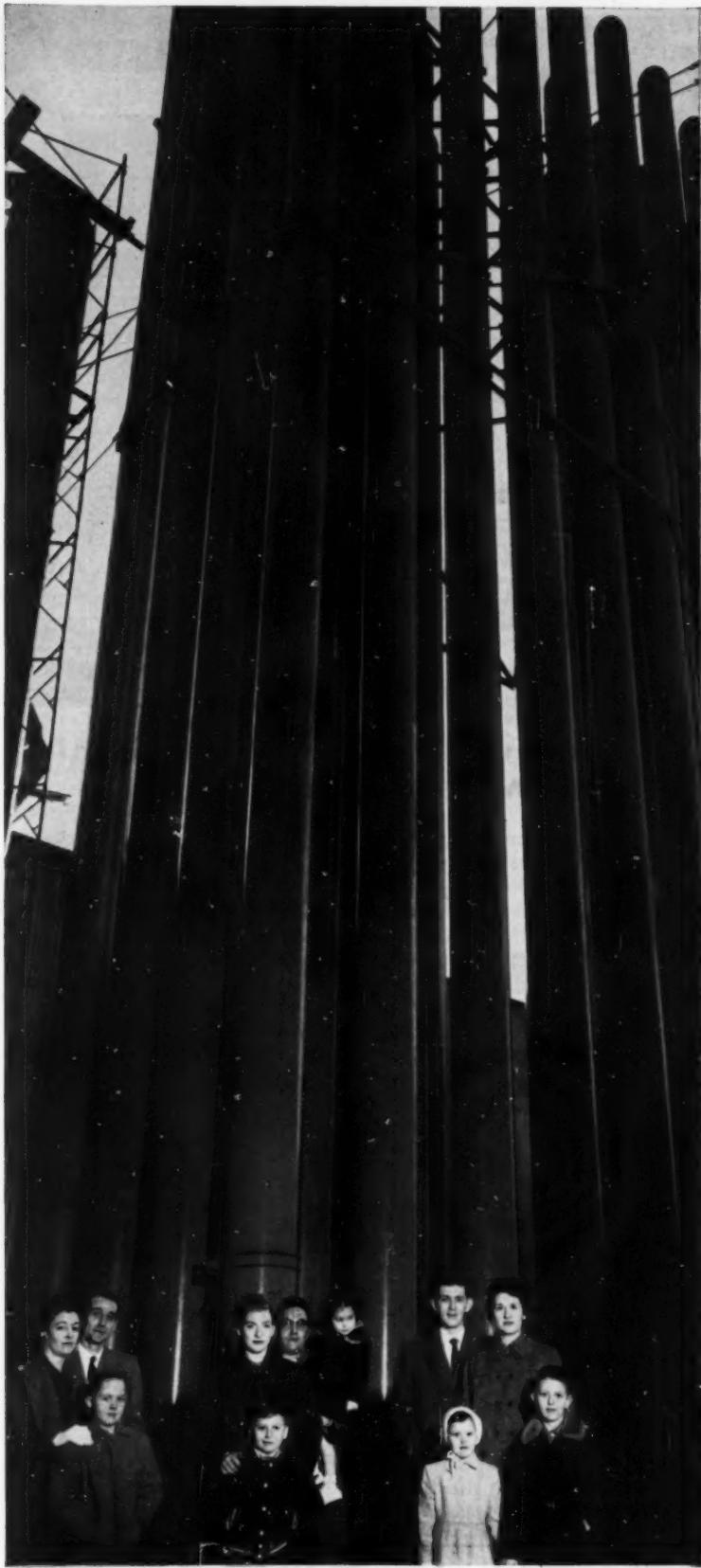
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## Skilled Trades Lose Round in Fight

### For Separate Deal With Auto Makers

The drive of some skilled workers for representation in automobile plants by a union other than Walter P. Reuther's United Auto Workers was set back this week by a National Labor Relations Board decision.

After a hearing in Detroit (BW—May 17 '58, p134) on petitions for severance elections by skilled trades groups, the NLRB ruled that, since the auto companies bargain with the UAW on a companywide, multi-plant basis, the units sought are too narrow in scope and are inappropriate for purposes of collective bargaining.



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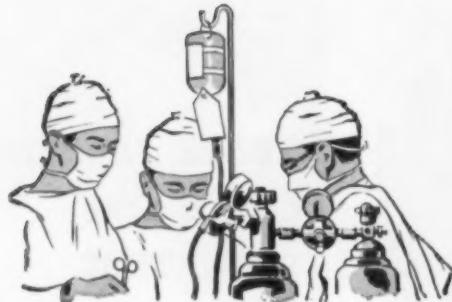
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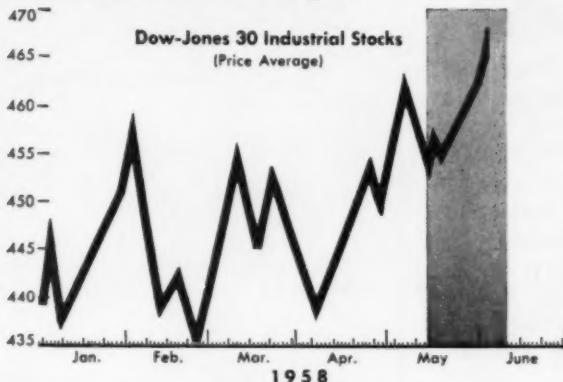
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# In the Markets

## Summer Rally?



**Year's New High Bolsters Optimists,  
But Some Skeptics Still Hold Out**

The stock market this week hit a new high for the year, and some Wall Street professionals were predicting that this was merely the start of a summer rally. The optimists bolstered their position by pointing out that it is usual to see the May highs exceeded in the summer months.

It was hard to pin down the precise reason for the market's upward surge, which carried the Dow-Jones industrials average above 465 for the first time since last September. Many brokers cited the lessening of tension in the French political crisis; others mentioned the first signs of an upsurge in such depressed sectors as steel and other metals.

But the most powerful influence on market prices was the buying power of institutional investors—mutual funds, pension funds, and bank-managed trust funds. Despite the fact that many fund managers were dubious about the market's show of strength, their fresh accumulations of funds were being placed in equities.

One subtle sign of the new optimism in the market was the renewed interest in such stock groups as autos, chemicals, and oils. Since last October, when the market hit a low of 419 on the Dow-Jones, most fresh investment funds sought the haven of recession-proof stocks—food chains, drugs, utilities. But now, the emphasis is on the stocks that have suffered the sharpest declines.

Institutional buying has encouraged private investment. As one broker explained, "My customers are no longer willing to sit on cash. They have the itch to buy in because they are afraid that the market will get away from them."

This explains the new high achieved this week. But there is still plenty of skepticism about the prospects for continued strength. True, the market normally performs well in the summer months, but many analysts think that, this year, a fall is more likely.

They base this prospect on the assumption that most

## MORE NEWS ABOUT THE MARKETS ON:

- P. 108 Treasury's Long-Term Cash Bonds Take Dealers by Surprise.

corporations cannot provide the kind of earnings expected by investors. A. M. Kidder & Co., for instance, bluntly states that "much of the optimism currently evidenced in the stock market is a reflection of earnings and dividends that may not materialize for quite a while."

But the stock market has, so far, discounted poor earnings reports and widespread dividend reductions. Individual stocks have been hit, of course, but by and large, the market is saying that the business contraction is over and better days—and profits—lie ahead.

• • •

## SEC Permanently Delists Bellanca, Condemns Dealings of Former Head

Imposing its stiffest penalty, the Securities & Exchange Commission this week called a permanent halt to trading in Bellanca Corp. common on the American Stock Exchange. For over a year, the stock has been temporarily banned from all trading. Now, by virtue of the SEC's ruling, over-the-counter trading in Bellanca can resume.

The SEC ruled that the company had flagrantly violated federal regulations by making "false, misleading, and inadequate disclosures." But it reserved most of its scorn for Sydney L. Albert, who used his huge holdings of Bellanca as collateral for loans the company made during a complex empire-building series of deals (BW-Jul. 20 '57, p165). The SEC said that once Albert got control of Bellanca in February, 1955, he and some associates engaged in a number of deals "which were tailor-made to suit the purposes of Albert and the other insiders."

Bellanca, currently operating only one division—which rebuilds used rubber and plastics machinery—fought to keep its listing by arguing that Albert no longer was associated with the company and that it would hold elections for new directors.

The company may appeal the delisting to a U.S. Court of Appeals.

• • •

## The Markets Briefs

**Gold mining shares continue to advance.** Analysts say that they're benefiting from their traditional role as a hedge against recession as well as from the outside chance that the drain on the U.S. gold supply will lead to an increase in the dollar price of gold (BW-May 24 '58, p68).

As expected, Lykes Bros. Steamship Co. and Reichhold Chemicals have been granted listings on the New York Stock Exchange. Both companies had paved the way by boosting their number of shareholders through common stock offerings (BW-Apr. 5 '58, p90).

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## Surprise Offering

Dealers hadn't expected Treasury to issue long-term cash bonds. Many feel it will slow trend to lower rates.

The bond market this week was surprised by one feature of the Treasury's latest refunding operation. This was the offering of a 27-year 3 1/4% bond, priced at one-half of 1% above par, for which subscribers must pay in cash.

Few bond dealers had expected a long-term offering, and none of them had figured on a cash issue. The fact that Pres. Eisenhower, only a day before the Treasury's announcement, declared that long-term interest rates should be lower, had reinforced the prevailing view that there would be no long-term offering.

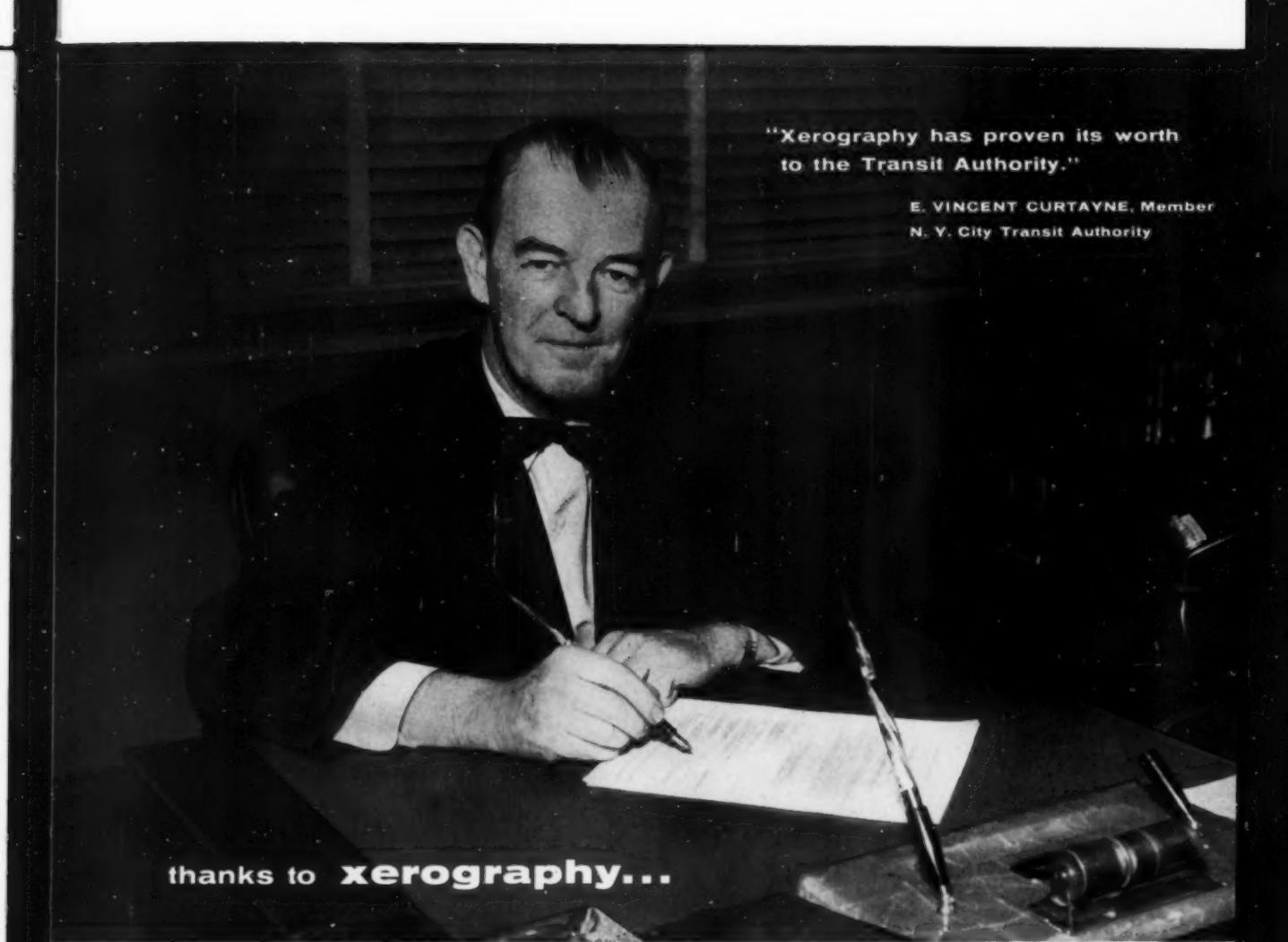
• **Probable Effect**—Although some dealers felt that the Treasury had "double-crossed" the market, the majority felt that the new long-term bond would impede, but not halt, the trend toward lower long-term rates. They pointed out that the Treasury limited the offering to only \$1-billion, which will not take a large amount away from competing private and local government borrowers.

Moreover, in putting the sale on a cash basis, the Treasury avoided the kind of upset in the market that an exchange—where holders of maturing securities have the right to subscribe for a new issue—might have produced. And it will also serve to curb speculation.

Despite the obvious attempts to limit the impact, the Treasury clearly indicated it intends to stretch out the maturity of the debt as often as it can—even if this means running the risk of interfering with private demand for long-term funds.

• **Sharp Change**—This is in sharp contrast to the debt management policies of the former Treasury team of Secy. George M. Humphrey and Under Secy. W. Randolph Burgess. After an initial effort to market a long-term issue, the 3 1/4% "Humphrey-dumplings," which fell below par when they were issued in the spring of 1953, the Treasury made few attempts to stretch out the debt. Instead, most of its sales were of short-term securities to the banks, which had an inflationary influence.

But the new team of Secy. Robert Anderson and Under Secy. Julian Baird have sold small amounts of long-term securities since they took over. In February, when they issued a 3 1/4% bond maturing in 1990, they came under a great deal of criticism for competing with other long-term borrowers. But the "Gay Nineties" have since gone to a handsome premium, and the Treas-



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ury's latest move indicates that it is prepared to stretch out the debt even if it is criticized.

- **Bad Timing**—Treasury officials were privately amazed and annoyed at the President's statement on interest rates. They felt that his timing "could not have been worse" because it served to mislead the market.

There is no question that many Administration officials would like to see lower interest rates. The President's Council of Economic Advisers repeatedly has expressed itself, in private, in favor of lower long-term rates to encourage borrowing. And Federal Reserve officials have held that the ease now apparent in the short end of the money market—this week the 91-day Treasury bill rate was a mere 0.7%—would "work its way through to the long end." The President evidently was expressing this point of view when he spoke out in favor of lower rates.

The market rose sharply after the President's statement. But this week, when the Treasury opened its books on the new issue, outstanding long terms lost their gains.

- **Long-Run Trend**—In the long run, though, the trend toward lower interest rates probably will continue. For one thing, the Fed is expected to continue its policy of "active ease," and another cut in the discount rate or in reserve requirements, or both, is considered likely. For another, corporate and local government demand for long-term funds is showing signs of fading, so that the supply of funds will exceed the demand.

Thus, the Treasury's new bond is not likely to be a permanent barrier to lower interest rates. At the most, according to one bond man, "it is a temporary roadblock."

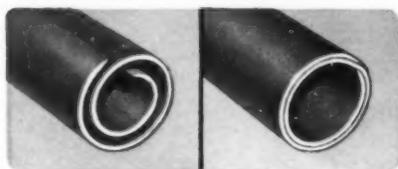
While dealers, in general, were not exactly pleased with the new offering, they were interested that the Treasury priced the bond at a premium. According to Girard L. Spencer of Salomon Bros. & Hutzler, this "is the first step toward getting away from the rigidity of offering new Treasury securities at 100. In the future, it is quite possible that there will be offerings at slight discounts, as well as at small premiums."

Most bond men felt that the issue would be a success, mainly because institutional investors, particularly life insurance companies, are in the market for long-term bonds. But dealers also pointed out that the premium price excludes buying by some state funds, which cannot legally pay more than par for any issue and Aubrey G. Lanston & Co. doubted that "bona fide long-term funds seek such an investment." As one dealer summed it up: "They won't go wrong by limiting the subscription to \$1-billion. But they couldn't raise much more than that." END

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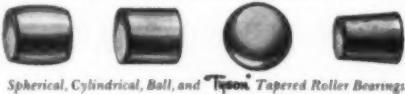


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# PERSONAL BUSINESS

BUSINESS WEEK

JUNE 7, 1958



Don't be surprised if you're virtually inundated with talk about stereophonic sound in the next few months. It's the big news in the phonograph industry, which has managed to solve some tricky problems. The main one: How to produce stereo records.

There's even some talk in the industry that stereophonic sound equipment will make much of the phonograph equipment now in use obsolete. In any case, if you're interested in the best reproduction of music, you should know about the many new developments.

Stereo sound, like high fidelity, aims at getting better music reproduction. "Hi-fi" improvements of the past few years have been directed at eliminating electronic distortion of sound, using better amplifiers and speakers to get truer tones and greater range. Stereo sound's target is another kind of distortion—the "flat" sound. Here's the idea:

In effect, an ordinary phonograph provides your living room with a window (at the speakers) opening into a concert hall. Stereo equipment tries to be more realistic by, to continue the analogy, removing one whole wall of your room and putting you right in the concert hall.

It's done like this: When the recording is made, two microphones 6 to 10 ft. apart pick it up. What each microphone hears is recorded separately; the microphone nearest the flutes, for instance, will record them louder and a tiny bit sooner than the other one. In your home, you play the two recordings through what amounts to two separate phonographs with their speakers also 6 to 10 ft. apart. And it should sound as if the flutes really were on one side of the room.

How good is it? That depends. It sounds better in some rooms than in others, and the effect also depends on the kind of music being played. A large choral group or full orchestra sounds very different on stereo; solo or chamber music, almost the same as on a conventional recording.

Getting into stereo is a big order. You need almost twice as much equipment—two amplifiers and two speaker systems. And you have to find space for two correctly spaced speaker cabinets. Also, until now you have needed a stereo tape recorder or player. That's because the only practical way to play two recordings simultaneously has been to imprint them on the top and bottom of a magnetic tape. So the recordings themselves have been expensive: A selection that might cost \$4 as an LP record costs \$15 as a stereo tape.

That's why stereo records are causing such excitement. Record companies have found a way to print different recordings in the groove of an LP record—for only a dollar or two more than present LPs.

Some of these new stereo disks are now on the market, and, by fall, most record manufacturers will be turning them out.

A number of packaged stereo outfits, ready to plug in and play stereo disks, are now available (\$190 to \$1,475) and there'll be many more soon. If you haven't a high-fidelity system and are anxious to have stereo sound in your home, your best bet is to consider these complete setups.

If you have hi-fi equipment, and want to enjoy the new disks, you can save money by adding the necessary component parts for stereo sound. Your complete equipment will include: (1) turntable, tone arm, and stereo pickup; (2) double preamplifier with provision for balancing volume of the two recordings; (3) two power amplifiers; (4) two speaker systems and speaker

# PERSONAL BUSINESS (Continued)

BUSINESS WEEK  
JUNE 7, 1958

cabinets. Some conversion "kits" for top quality standard players are available.

If you already have a good phonograph, you can convert to stereo records for about what your present system cost you. With just a stereo pickup (\$15 to \$100), which will also play conventional records, you can play the new disks—but you won't have stereo sound. You can, however, get started on your new stereo library.

Will stereo tape recordings become obsolete? Most fans agree there will be a place in the future for both tapes and disks. Tape equipment's ace in the hole is that it's the only way users can record their own music.

—•—  
**If you'll be visiting the Brussels World's Fair, here are some pointers:**

First, if you haven't already done so, make firm hotel reservations. Most top hotels are booked solid, but perhaps an acquaintance in Brussels can pull some strings. The best hotels are the Metropole, Plaza, Palace, Atlanta, and Amigo; they run about \$25 a day for two. Newest and ultra-swanky is Brussels Residence (\$30 a day).

Avoid if possible any of the temporary motels put up for fair visitors. The Park Motel is the best of them, costs \$15.80 a day for two; however, by U. S. standards it rates as a third-class motel.

In calculating the length of your visit, remember the fair stretches over some 500 acres. It takes at least three or four days for adequate coverage, about a week for a thorough look. Make sure to take along your most comfortable walking shoes—and a raincoat.

One quick way to get oriented is to pick up a fair map and hire a "pousse-pousse," a sort of motorized rickshaw that accommodates two and costs \$1.40 an hour.

You can get a bird's-eye view—and also enjoy the novelty of a helicopter trip—by booking a ride at the Sabena Airlines heliport right on the fairgrounds. The three-minute ride costs \$3.

If the pace gets too tiring, you'll find a "day hotel" where you can rent a room for a nap and shower. The utterly exhausted sightseer can even buy 20 minutes under an oxygen tent for \$1.60.

Among the most popular restaurants are the Russian, Japanese, Hungarian, Italian, and Czechoslovakian. Most are not too expensive, but a dinner for two, at the Russian pavilion, complete with caviar and vodka, will set you back \$30 or better.

Also, be sure to take in the restaurant atop the Atomium. The food is expensive (about \$10 a person) but the view of the fair and of downtown Brussels is spectacular. Reservations are a must.

At night, be sure to take in the concerts or ballet performances at one of the several fair auditoriums. And in downtown Brussels, there are equally top-flight cultural activities under the auspices of the Festival Mondial. You can get a complete list of these events at the U. S. pavilion.

And you'll want to spend some time at Belgian Village, a replica of a Belgian town at the turn of the century. It has 50 cafes, six restaurants, 10 snack bars, and several night clubs packed into its 12 acres—more than enough to keep you busy until the wee hours.

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## Lebanon Gets the Squeeze Play

Riots (above) by pro-Nasser insurgents against Chamoun government put a strain on country's "Switzerland" role.

For the past month, Lebanon has been teetering on a political tightrope, neither falling into the arms of Pres. Nasser's United Arab Republic nor openly bidding for close alignment with the West.

But riots and street fighting, bordering on outright civil war (picture), have seriously undermined Lebanon's special role in the economic development of the Middle East. Even with a political compromise likely—between the present government and its opponents—U.S. and West European businessmen are having second thoughts about Leba-

anon's unique position as the Middle East center for foreign capital.

Last year, Beirut was caught up in a business boom. Already a world trade center, the capital city of Lebanon became the haven for foreign companies and banks squeezed out of Cairo by Nasser's post-Suez "Egyptianization" policies. And the upsurge of interest in Middle East oil and economic development helped lure foreign businessmen to Beirut, where trade and commerce could thrive in a somewhat unemotional atmosphere.

- Change—This week, the situation in Beirut, Tripoli, and other Lebanese towns was shockingly different:

- Business was almost at a standstill—even though some stores and offices are defying terrorist bomb threats and reopening.

- Investors—mostly Syrian, Saudi



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Arabian, and Kuwaiti businessmen—have transferred possibly as much as \$50-million from Beirut to West European cities.

- The country has been losing nearly \$1-million daily from the economic slowdown, on top of a reported 300 persons killed.

- Like Switzerland—Western and Arab businessmen have traditionally viewed Lebanon as the "Switzerland of the Middle East." In most ways, the country lives up to the comparison.

It's small in area (map, page 117). It has only 1.5-million people. Over half are Christians, the rest Moslems. The government reflects this division, with Pres. Camille Chamoun, a Christian, Prime Minister Sami El-Solh, a Moslem.

- Business Mecca—Strategically located, in this atmosphere of Arab and Westerner, the country has made trade its livelihood from as far back as the days of the Phoenician merchant-sailors. Its imports are much greater than its exports—\$199-million against \$48-million. But it makes up the difference mostly through "invisible" income. In 1957, more than 541,000 tourists and businessmen stopped off in Beirut. Lebanese living abroad sent home between \$12-million and \$15-million. Transshipment of goods, through Beirut to Syria, Jordan, Iraq, and Iran, earned \$69-million.

Since becoming independent of France in 1941, the country has attracted British and American banks and companies. About 30 U.S. companies opened offices or branches in Beirut last year, bringing the total number of U.S. companies to around 120.

On top of that, the Middle East's two major pipelines terminate in Lebanon. The American-Arabian Oil Co.'s "tapline" runs from Saudi Arabia to Sidon, south of Beirut. Iraq Petroleum Co.'s line goes from Iraq to Tripoli in the north.

- Signs of Distress—Now, while the flow of oil for export to the West is threatened, business has been paralyzed by terrorism, sabotage, and street fighting. With raw materials no longer coming in and exports nearly halted, industrial production—usually \$500,000 daily—has dropped 50%. Hotels normally packed are almost empty. Banks report that bills are not being paid. One New York bank operating in Beirut sees a 30-60 day "debt moratorium" as a "must"—though the Lebanese government opposes this for fear of endangering the country's reputation for financial soundness abroad.

The most obvious sign of distress is the stoppage in construction activity. One reason for the stoppage is that when the fighting started a month ago, the Lebanese government rounded up Syrians—some 100,000 who provide the country with most of its unskilled labor



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—and sent them back across the border.

- **Crisis Spreads**—In fact, Lebanon's major crisis has stirred up a minor crisis in neighboring Syria. With the border closed, Syria has been unable to get oil from Lebanese refineries. It has rationed gasoline, hiked gas and oil prices around 20%, and has been promised new oil shipments by sea from Egypt. Besides this, the Syrian government is faced with finding jobs for workers normally employed in Lebanon.

- **The Blowup**—The immediate cause for the strikes that broke out in Beirut a month ago was the alleged intention of Pres. Chamoun to run for a second term, after getting the Lebanese parliament to amend the constitution.

The real cause was the effort of disgruntled feudal chiefs and ambitious political bosses to align Lebanon closely with Nasser's Pan-Arabic movement. Thus, while the rebellion has been flavored with anti-West and anti-American outbursts, its target is primarily the substitution of a pro-Nasser government for the Chamoun-led government that has tried to make Lebanon a meeting ground between East and West.

- **Buildup**—For weeks before the outbreak, Nasser sympathizers had been getting shipments of arms from Syria. Syrian intelligence officers were organizing cells in Beirut, Tripoli, and Sidon.

- **Attack**—Chamoun's opponents struck hard, while Nasser was visiting in Moscow, with the expectation that:

- The government and 6,000-man army would fold quickly.

- The Christian groups, advocating an independent Lebanon and suspicious of Nasser's ambitions, would give in to the Moslem extremists.

- The rebellion would chalk up a victory for Nasser's United Arab Republic before Iraq and Jordan had time to consolidate.

While the rebellion has torn apart the country, the army has stood firm. It has avoided ruthless repression of the Nasser extremists, simply to prevent making deep political wounds between Moslems and Christians.

Similarly, the Lebanese government is looking toward a political, rather than military, solution to the rebellion. And it is trying to do this on Arab terms, such as this week's meeting of the Arab League in Libya which discussed a compromise agreement. Already the Lebanese government has twice postponed bringing the issue before the U.N. Security Council. That would put Washington on the spot, in view of its recent efforts at renewing friendly relations with Nasser.

- **Moscow Support**—Even if there's a temporary solution, it's clear that Nasser has his sights set on Lebanon. And he'll get Moscow's support in helping him toward his goal as the leader in the Arab world. **END**

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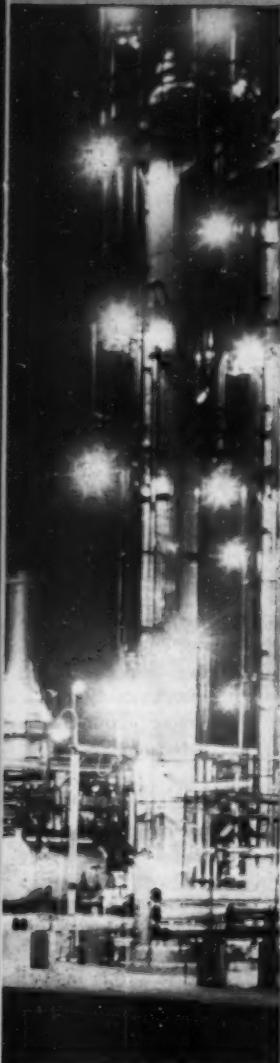


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# In Business Abroad

## Red China Announces the Birth

## Of Its Passenger Car Industry

Communist China has announced production of its first passenger vehicle, the East Wind, by the Number One Motor Car Plant at Changchun, Manchuria.

The East Wind, a four-cylinder, six-seater model, has a 70-hp. engine, heating, and "shock and sound" insulation. Its top speed is about 75 mph., and gas consumption is said to be 20 miles per gal.

The Reds claim that the motor is simple in structure, easily assembled or dismantled. A Japanese Automobile Assn. spokesman commented: "It must kick up quite a rumpus when it runs, if the engine is as simple as they say."

• • •

## India Will Try to Ferret Out

## Huge Hoards of Gold and Silver

Like many a recent French government, the government of India will now try its hand at inducing private citizens to part with hoards of gold and silver. The total amount—an estimated \$10-billion—is considerably more than the cost of India's unsuccessful Second Five-Year Plan.

A Finance Ministry commission has asked the government to formulate a policy with strong enough measures to bring out the hoarded metals. It also wants the government to halt the sale of gold in the free market. A third recommendation is for the government to float a gold loan at a high interest rate, repayable after 10 years.

Traditionally, India's peasants have invested in gold-and silver ornaments. Gold hoards are also traditionally the result of efforts by Indians to evade taxes.

• • •

## U.S. Company Will Build Plant Here

## To Make New Line of Japanese Fibers

Last week, Kurashiki Rayon Co., of Osaka, Japan, synthetic fibers manufacturer, announced that it will license a line of polyvinyl alcohol fibers for manufacture by Air Reduction Co., Inc., of New York.

Air Reduction will build a \$12-million plant at Calvert City, Ky., to produce 20-million lb. annually of polyvinyl alcohol resin starting in 1960. Earlier this year, Air Reduction paid a reported \$750,000 to the Japanese company when it took a license to produce polyvinyl resin according to Kurashiki processes.

The Japanese company claims that its new fibers combine many of the qualities of Dacron and cotton. Its fibers are called "Kuron," "Kurashiki Vinylon," and "Eremona." Kurashiki is reputed to be the original producer of vinylon fiber.

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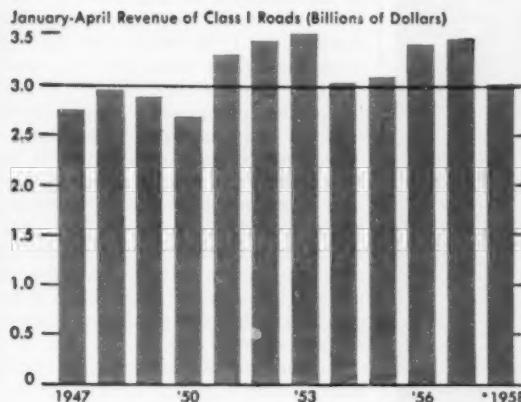
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## FINANCE

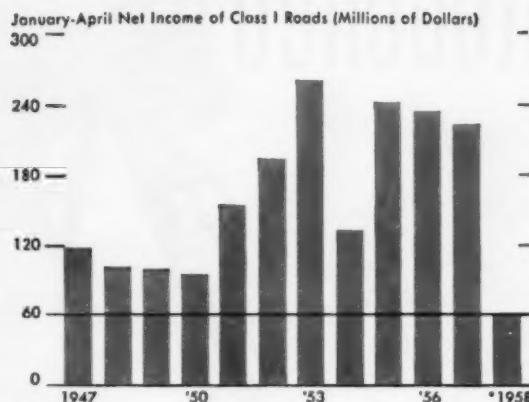
# The Railroads This Year:

Revenues are the lowest  
since 1950 and...

...Net income is the lowest  
since the war

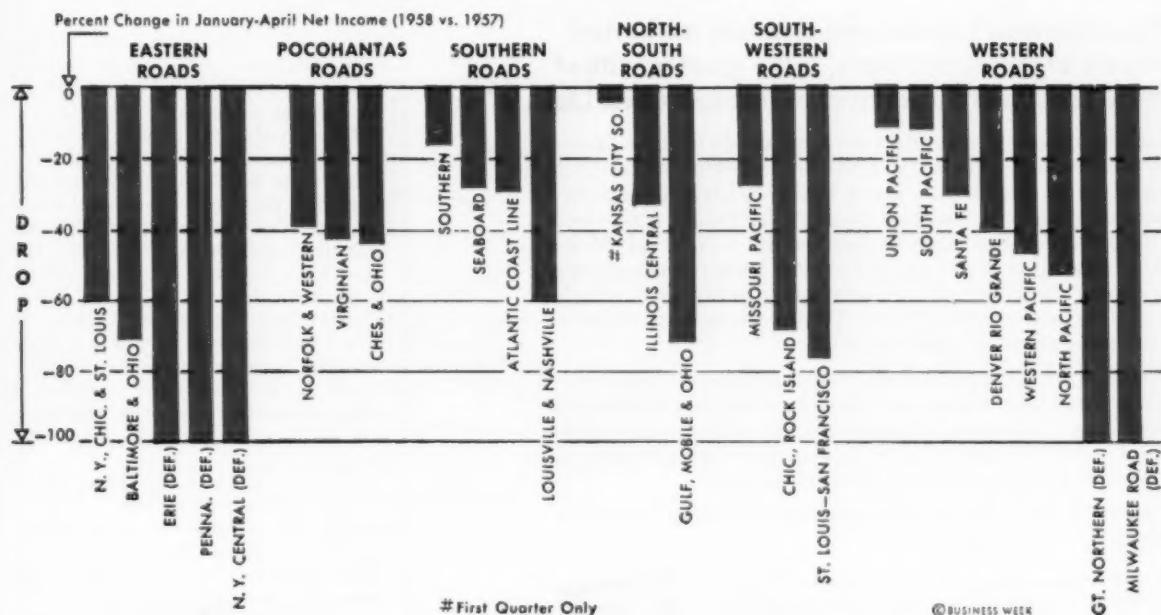


Data: Assn. of American Railroads.



\*April, BUSINESS WEEK Estimate

All have suffered — but some not badly



# More Traffic's the Only Cure

The stock market is no 100% predictor of the other sections of the economy—though you might think so to hear its admirers talk.

But sometimes the market really does score a prophetic bull's-eye. Take two years ago, for instance, when investors and traders suddenly switched off the railroad stocks, right at the peak of the longest and most profitable of all bull

markets. Having switched, they kept on selling with rare interruptions until, by the end of 1957, they had wiped out almost all of the 90% gain scored by Standard & Poor's rail index between September, 1953, and May, 1956.

You can see just how right the market was by looking at the dismal fiscal showing of the rails, in the top layer of charts. The sellers look even smarter

when you notice that they began unloading at a time when carloadings were actually perking up a bit, and rate increases were giving a boost to gross revenues.

• **Defying the Omens**—The selling began, then, in defiance of these plus signs, and rail operations very soon made the sellers look good, as they first faltered a bit and then fell off at an

# Riches Untouched



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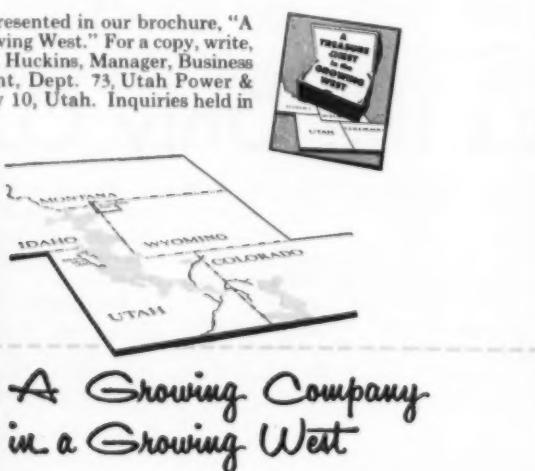
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accelerating pace, especially after recession influences started making themselves felt.

For all of last year, net earnings of the Class I roads dropped 20% below 1955. In the first four months of 1958, the showing was even more dismal. Gross revenues of the Class I roads were the worst recorded for January-April since 1950, while net earnings were the lowest since the war, more than 75% below their 1955-1957 average. The industry's working capital position has been equally hard hit.

• **Reverse Switch**—Inevitably, this deterioration has brought numerous cuts and omissions of dividends. Startlingly, in the face of this bad news, S&P's rail-index has been climbing rather steadily in recent weeks—exactly reversing its action of two years earlier, when it began to fall despite the prosperous auspices of those days.

At the end of last week, the index was perched a jaunty 21% above the bear market low in the closing days of 1957. In climbing, it had regained a good quarter of the 45% drop from its bull market high reached in the spring of 1956.

Some analysts are beginning to wonder whether the market, having been so very right in predicting the decline of rail prosperity, is now showing equal insight in foretelling an end to the railroad recession.

• **Diversity**—Leaving psychic guesses to one side, both Wall Street and the rail industry are hopelessly divided on the immediate prospects of the trade. Some railroaders have been encouraged by recent traffic indications. Others, like the New York Central's president, Alfred E. Perlman, find no balm in Gilead. Thus Perlman told his stockholders at their annual meeting in mid-May that, "frankly, I see no signs of a pickup. There has not even been a sign of a complete leveling out or a 'saucerizing out' so far as our carloadings are concerned."

Perlman's words brought sharp stress to one very important new factor in judging the railroads: It is no longer possible to discuss the industry as a whole. Railroads collectively have been subject to a wide variety of ills, but the separate troubles strike individual roads with unequal virulence. One road takes its most grievous hurt from truck and other competition; another is most sorely beset by passenger deficits or by high wages; still another finds its sorest ache as a reaction to the over-all slowdown in business.

• **Eastern Troubles**—To this inter-industry variation, the big Eastern roads are an exception. They suffer the full measure of all the troubles that beset other areas in such diverse fashion.

Thus, the Eastern roads are loaded to the gills with passenger business, notably

*This announcement is neither an offer to sell nor a solicitation of offers to buy any of these securities.  
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May 28, 1958

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an immense amount of costly-to-handle commuter traffic. On freight, most of their business falls into the expensive-to-handle "short haul" category that is especially vulnerable to truck and barge competition. Their terminal costs and property taxes are high. They run through industrial areas that have been bearing the brunt of the recession.

Railroads in other parts of the country get some partial share of all these troubles, but not nearly so big a share as the Easterners. In the East, for the first four months of this year, the New York Central had a \$21-million deficit after charges, compared with a plus of \$8-million a year earlier; the Pennsy had a \$19.6-million deficit instead of a \$8.4-million profit.

• Softer Blows—Now look elsewhere. For the same period, the Southern Ry.'s earnings were off only 16%, the Seaboard Air Line and the Atlantic Coast Line were down 28% apiece, the Atchison, Topeka & Santa Fe 30%. The Union Pacific was down only 11%, and the Kansas City Southern a really tiny 4%—for the first quarter.

The bulk of stock market participants have been well aware of this diversity among the rails. The buying that has pushed the index up has actually been concentrated in the roads that are doing relatively well and still covering dividend rates by "satisfactory" margins. The charms of these "better" issues have also been enhanced by the high dividend return that is inherent in the low prices to which they fell during the 1956-1957 selling.

• Awakened Congress—Interest in the railroads stocks has gotten an additional boost from the fact that Congress has finally become concerned with the troubles of the industry. Hopes that the legislators might really do something for the harried roads grew stronger when a Senate subcommittee on surface transportation came up with some genuinely constructive suggestions, from a rail point of view. Among the proposals: (1) a temporary program of guaranteed loans; (2) repeal of the 10% excise tax on passenger fares and the 3% levy on freight charges; (3) increased authority for the Interstate Commerce Commission to overrule local authorities and permit elimination of costly "ghost trains"; (4) rate adjustments to allow the railroads to compete with trucks, barges, and others; (5) tax deferrals to allow the roads to build up "construction reserves" for equipment and facilities.

Rail analysts are well aware of the historic difficulties of getting any such legislation through Congress, but they think now that the legislators are at least more keenly aware of the seriousness of the roads' troubles. The general thinking is that there is a good chance that depreciation allowances will be

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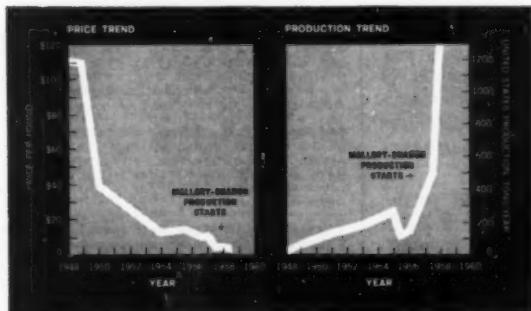
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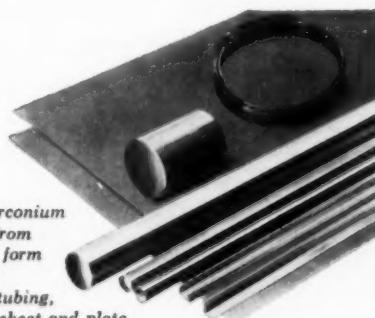
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liberalized; but there is very little hope of a cut in the excise taxes, and almost no hope at all that ICC rate-making procedures will be changed.

• Determinants—In any case, analysts are widely agreed that the near-term trend of rail revenue and earnings will be determined primarily by the rate of general business activity and by the degree to which the roads can triumph in their ceaseless battle to control operating costs. Nothing that Congress might do would be of material help if the recession keeps carloadings at their present 20% below 1957 levels, and if costs continue to mount.

Business may indeed be leveling off, as some claim, but it will take more than a leveling off of carloadings to offset the railroad profit squeeze. In 1956 and 1957, average prices the roads paid for materials and supplies climbed twice as fast as they had in 1951-1955; wage rates went up three times as fast. This year's significant weakening in fuel costs has been more than canceled out by rising prices of steel products and by rising hourly wage rates.

All in all, many roads are likely to have a tough time for the rest of the year unless there is a sharp, sudden increase in traffic.

## FINANCE BRIEFS

Dividend casualties rose in May—to the highest monthly figure since at least 1946, according to a compiler who counted 36 omissions and 56 reductions. In the first five months of the year, there were 136 omissions and 219 cuts, compared with 63 and 49 in the year-ago period.

Hancock Oil Co., a large West Coast independent, says a major Eastern producer wants to buy it. "No offer has yet been made, but talks are continuing," says Hancock. Trade gossip calls Tidewater Oil Co. the would-be purchaser.

There were 278 business failures in the last week of May, says Dun & Bradstreet, compared with 225 in the year-before week, and 238 two years ago.

Equitable Life Assurance Society has been gradually shifting its investments from long-term industrial securities into real estate mortgages, says Pres. James F. Oates, Jr. Mortgages yield 5% or better, says Oates, while the return on industrials has been declining. He does not expect, however, that his company's mortgage purchases this year will equal those of 1957. Equitable's portfolio now contains 61% industrial debt securities, 33% mortgages, and 6% preferred and common stocks.

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# What the French Crisis Means

Gen. Charles de Gaulle has come to power in France with the conviction that he can solve the country's basic problems—the war in Algeria, the political weakness of the Fourth Republic, and France's recurring financial crisis.

De Gaulle's return to power is nothing for Americans to cheer about—he came back at the behest of the French army that was angered by a series of defeats starting back in 1940. But the General's return to power in this manner should not cause despair for Americans, nor occasion criticism.

De Gaulle has no inclination to be a dictator on the Hitler-Mussolini pattern. Nor did he build a Fascist party and put himself in power. He is not the servant of the French army, despite the fact that it made him the French Premier. His choice of cabinet members shows he wants to save the basic democratic structure of France. He is leading France today only because French democracy, as operated under the Fourth Republic, failed to cope with the main issues confronting the country.

No American who cherishes our traditional ties with France or who understands how delicate the world balance of power is today can afford to extend de Gaulle anything but good wishes, as Pres. Eisenhower has done. For one thing, we must hope de Gaulle will be able to solve the Algerian problem. We ourselves have been doing so badly in the Arab world since the Franco-British misadventure at Suez, that we would do well to stand aside while de Gaulle tries to deal with North Africa. We must hope that his government will be able to offer a compromise between the legitimate aspirations of the Arabs, the traditional interests of France, and the security needs of the West as a whole.

## The Big Questions

If de Gaulle quickly lays the groundwork for an Algerian settlement (which still might take months to achieve), we must hope he will then deal in an equally constructive way with France's role in NATO and European economic integration. France's basic national interests, as they are understood by French officials, businessmen, and most members of de Gaulle's cabinet, clearly lie in maintaining the country's commitments to NATO and the Common Market.

However, it's inevitable that de Gaulle will make some show of French nationalism in both areas. While he may accept the economic implications of the Common Market and do his best to put France's economic house in order, he almost certainly will reject following such "Europeans" as Jean Monnet into political federation. But even this could have advantages if it facilitates a compromise between

France and Britain on the proposal for attaching the Free Trade Area to the Common Market.

With respect to NATO, de Gaulle is certain to take a more independent line than previous governments. For example, he may decide it's politically expedient inside France to push for a summit meeting at a time when Washington is reluctant to commit itself to such a conference. If this should happen, we might well temper our annoyance by remembering that back in 1955 we ourselves pursued a will-of-the-wisp concept for an easy accommodation with Moscow.

## Hard Choice

It's possible that France is now tied up with so many political and economic difficulties that no solution is possible for de Gaulle or anyone else. If that should prove to be the case, we might be forced to drop our NATO policy in favor of tight bilateral ties with Britain and West Germany—not forgetting Benelux, Spain, Italy, Turkey, Japan, and other nations that are ready to hold firm.

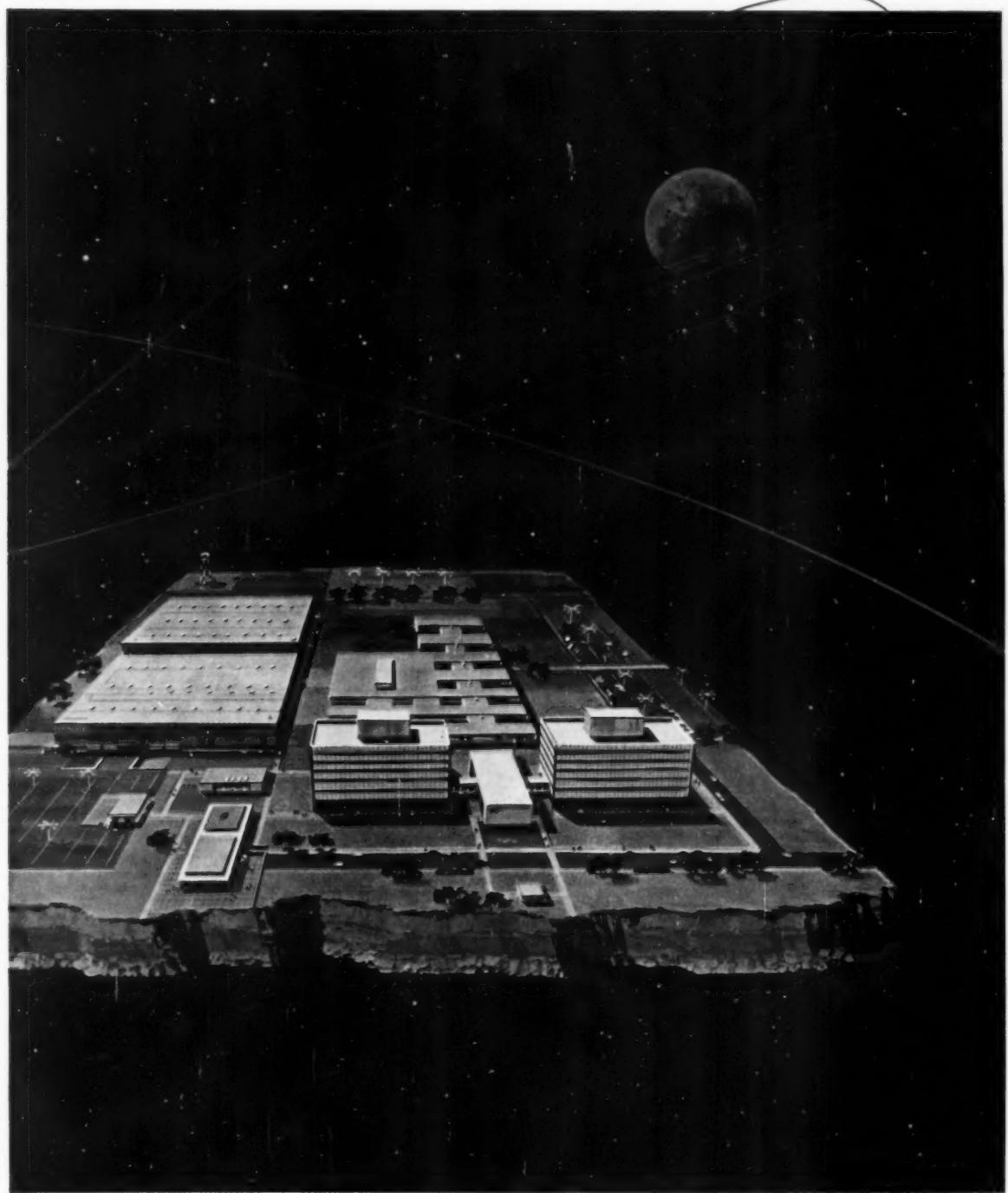
Even the possibility that the French crisis could force such a choice should now awaken us to a new appraisal of our position as the leader in the struggle against Communism. If we were handling our own affairs better and using all our own resources to generate full military and economic power within American capacity, we would be less worried about what is happening today in France. It might be useful to look back to the way the British handled their position in the last century, maintaining a two-power standard under which the fleet was always capable of handling a combination of two of Britain's strongest potential enemies. Today's version of this for us would mean air and missile power sufficient to handle Russia, regardless of any crisis in France or elsewhere.

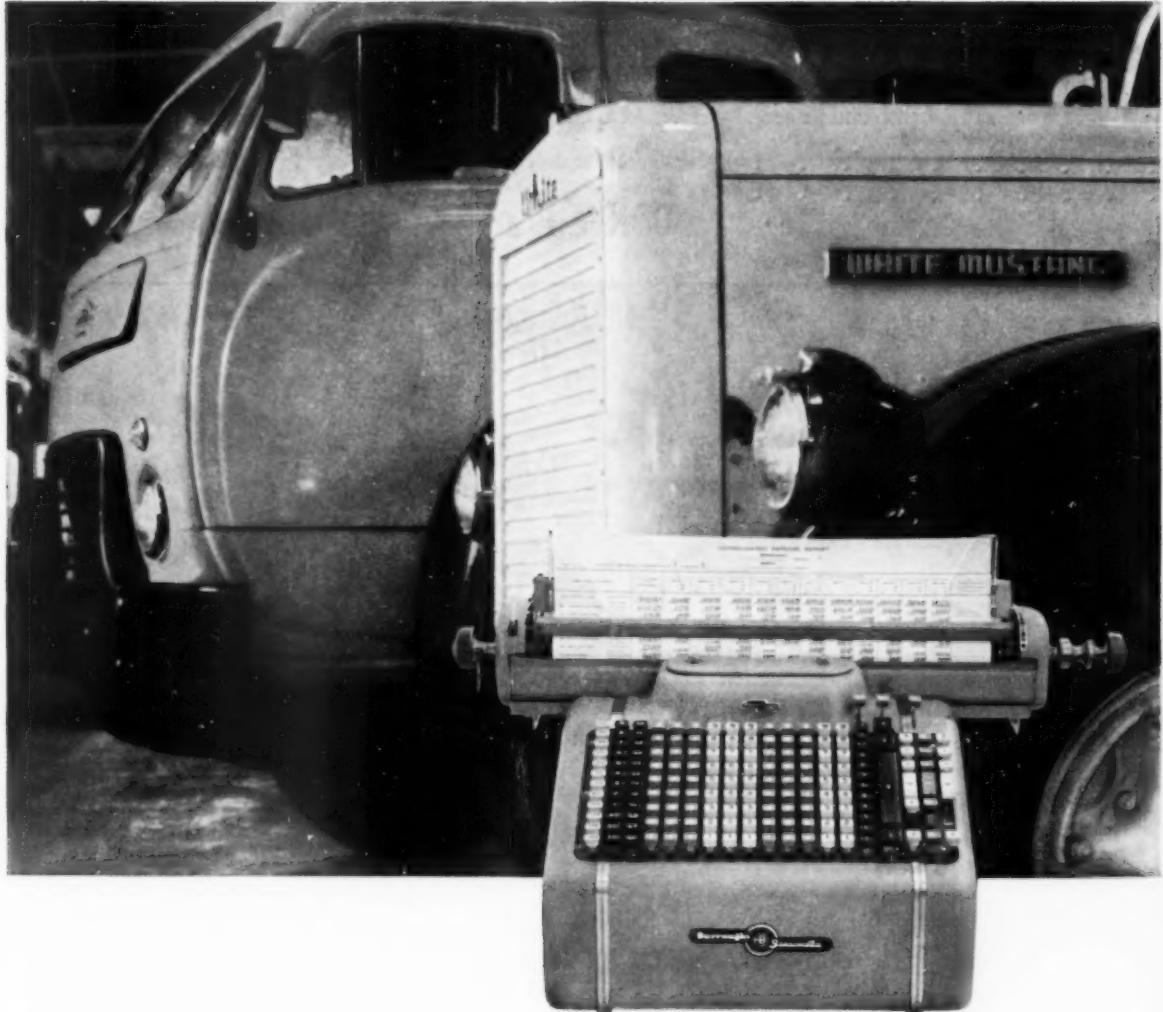
In view of Russia's growing economic power, we also need to prove over the next few years that our economic system is more productive than Russia's. Until this year, most of the non-Communist world has accepted this fact. Today there are doubts in Western Europe, as well as in Latin America, the Middle East, and South Asia. Even our friends in Western Europe are talking privately about making economic links with the Russians if the U.S. recession continues much longer. In view of the American contribution to European economic recovery, this looks like ingratitude—to say the least. But it is a fact of life that we must face the entire Communist world, and we need not kid ourselves that it's easier to beat Communism alone than with the support of allies who still believe their best interests are the same as ours.

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